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Anne deGruchy Low-Beer Dettner

A WOMAN'S PLACE IN SCIENCE AND PUBLIC AFFAIRS:
1932-1973

With Introductions by
Helene Maxwell Brewer and Lawrence Kramer

Interviews Conducted by
Sally Hughes and Gabrielle Morris
in 1994 and 1995

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DETTNER, Anne deGruchy Low-Beer (b. 1905)

Biochemist

A Woman's Place in Science and Public Affairs, 1932-1972, 1996 xxiii, 260 pp.

San Francisco family and 19th century forebears: cultural life, summers in Tiburon; University of California education interrupted (1922-1960); pursuing a scientific career: experiences at Stanford Hospital (San Francisco), Donner Laboratory, Berkeley Radiation Laboratory, University of California Medical School, including early radioisotope research, treatment, bioassay programs and publications (1940-1971); volunteer achievements: San Francisco League of Women Voters presidency (1932-34), California director National Youth Administration (1934-1939), United Crusade Settlement House Reorganization Committee chair (1958) and Aging Committee chair (1964), and others.

Introductions by Helene Maxwell Brewer, Professor Emerita of American Literature and American Studies, Queens College, City University of New York, and Lawrence Kramer, Chairman of the Board, Kramer, Blum and Associates, Inc.

Interviewed 1995 by Sally Hughes and Gabrielle Morris for the University of California, Source of Community Leaders Oral History Series. Regional Oral History Office, The Bancroft Library, University of California, Berkeley.

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PREFACE

On the occasion of the 50th anniversary of our graduation from the University of California at Berkeley, the Class of 1931 made the decision to present its alma mater with an endowment for an oral history series to be titled "The University of California, Source of Community Leaders." The Class of 1931 Oral History Endowment provides a permanent source of funding for an ongoing series of interviews by the Regional Oral History Office of The Bancroft Library.

The commitment of the endowment is to carry out interviews with persons related to the University who have made outstanding contributions to the community, by which is meant the state or the nation, or to a particular field of endeavor. The memoirists, selected by a committee set up by the class, are to come from Cal alumni, faculty, and administrators. The men and women chosen will comprise an historic honor list in the rolls of the University.

To have the ability to make a major educational endowment is a privilege enjoyed by only a few individuals. Where a group joins together in a spirit of gratitude and admiration for their alma mater, dedicating their gift to one cause, they can affect the history of that institution greatly.

The oral histories illustrate the strength and skills the University of California has given to its sons and daughters, and the diversity of ways that they have passed those gifts on to the wider community. We envision a lengthening list of University-inspired community leaders whose accounts, preserved in this University of California, Source of Community Leaders Series, will serve to guide students and scholars in the decades to come.

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INTRODUCTION--by Helene Maxwell Brewer

Anne Dettner: A Highly Personal Reminiscence. Life at the Women's Faculty Club¹

I first met Anne Dettner--then Anne Low-Beer--in July 1963. She was temporarily staying at the Women's Faculty Club, working on research at Donner Lab. I had come out from New York, as I usually did, to spend the summer reading at The Bancroft Library.

No description of life at the Women's Faculty Club before the mid-seventies should ignore two aspects, the bathrooms and the food. Unlike today's state-of-the-art, computerized club, where each bedroom has its own modem, bathroom, and telephone, the club in the 1960s was John Galen Howard's original 1923 building. The best bedrooms were arranged so that there was one bath for every two people, and there were strict rules about keeping the doors unlocked when the facilities were not in use--obviously an entirely reasonable requirement. If one were living in a room without a bath, one had to trudge down the hall to the humid showers and often chilly toilets.

The bedrooms were dingy white with curtains of a corresponding color. There were no telephones unless one had one installed at one's own expense. Frequently friends or relatives, unaware of this arrangement, telephoned late at night. If the downstairs office was open, the person in charge pushed a buzzer which resounded in one's room, with shrieking, penetrating tones. As fast as possible, one loped to the pay phone at the end of the hall. These halls had superb acoustics, with the result that one's conversation was effortlessly overheard in every room on the floor. Sometimes one was questioned the next day, such as, "So you're going to Stinson Beach this weekend! How long will you be gone?"

Then, there was the food. I suspect it was of the school of Betty Crocker, but whatever it was, most of us ate it gratefully. There was a salad bar, utterly different from the WFC salad bar of today. In the late '50s and early '60s we ate a great deal of quivering jello mixed with canned fruit (jellied fruit salad), or plain lettuce, or cottage cheese, or deli macaroni. Some of the salads contained cut up marshmallows and maraschino cherries. And of course there were the usual sandwiches, toasted and untoasted on Wonder Bread.²

¹For more information, see *The Women's Faculty Club of the University of California, Berkeley, 1919-1982*, Regional Oral History Office, University of California, Berkeley, 1983, which includes an introduction by Helene Brewer.

²By "usual sandwiches" I mean chicken, club, BLT, ham, cheese, and tuna.

In addition, the club served dinner. That this miracle was achieved five nights a week is difficult to believe, but that is how often dinner appeared. A wonderful and heroic woman (I think her name was Katie) wrestled with a decrepit cast iron stove that would have been prized in any museum of early 20th century Americana and she produced remarkable dinners, roast lamb, roast chicken, ham, and even roast beef. There were two kinds of wine, red and white, vintage, type, and locality studiously ignored. The manager was very strict about serving this stuff herself. I remember her rushing forward, almost shrieking, "No girl of mine [the waitress] shall ever touch a cork!"

In those days the dining room was a plain, rectangular, dark-seeming room--dark because the woodwork was dark, the furniture was dark, and so was the uncarpeted floor. The residents of the club, permanent or temporary, sat at what was called the refectory table under the often censorious scrutiny of two permanent non-resident occupants. Non-residents sat at smaller tables. Sometimes they gave dinner parties and I took it as a sign of serious preoccupation with food when they brought their own wine.

There was no parking problem. Optometry and the Business School had not been built, which meant that the club had more parking space than ever was needed.¹

When I arrived at the club for my usual summer stay, Margaret Murdock told me with some fluttering that I would be sharing a bathroom with Anne Low-Beer but that she was "really very nice." I didn't know if the "but" was a warning or a recommendation; however, I concluded that because we were strangers who would never recognize each other, I should leave her a note asking what time she liked to take her shower.²

Anne later confessed that this note astonished her. The previous September she had arrived at the campus fully expecting to have a room with a private bath as she had been promised. Instead, she had to share but was assured that when winter came her wish for privacy would be granted. When January came, however, she found herself locked out of the bathroom, at all times denied access. Her so-called bathmate was reportedly a minor State Department official who had recently administered a plebescite in some

¹The club front and back gardens had bushes that were grown from slips taken from the gardens of members. There was a verbena bush that Margaret Murdock invariable called "Kitty Wickham."

In summary, the club was shabby but pleasant in a nostalgic way--"old Berkeley" we used to say defensively. The garden was "old Berkeley," too. No wonder we loved it! Anne Dettner and I both believe that we paid \$50 a month for a room with a shared bath and the meals were correspondingly inexpensive!

²Anne told me that she had been given the same information about me.

remote, unknown country. Why she was at the University I don't know, but I do know that she successfully bullied the downstairs office into accepting her ultimatum of "Nobody else in my bathroom." Consequently, Anne had to sit in her room either listening to the sloshings on the other side of the locked door or darting back and forth down the unheated hall to the showers, soap, face cloth, and towel in hand.

That is why my note produced astonishment. In later years Anne has frequently said, "It's not often that a friendship has been formed on the basis of a shower schedule," but that is what happened.

My first impression was of a small energetic woman (five feet tall) with intensely blue eyes. She walked rapidly and talked decisively, with liveliness and an impressive memory for details and facts. Later I wondered if her experience on the debating team at Lowell High School had resulted in the clarity and organization she displayed in argument and decision. She worked hard at the lab--always eight hours and when an experiment required it, longer. She was widely travelled, having lived in Sweden and England and was and still is a woman of wide and discriminating interests: biochemistry, of course; music and art, past and present; drama; contemporary literature, particularly English and American fiction. An extraordinarily good cook, she could turn out with seeming effortlessness all sorts of things, crab souffles, Oysters Rockefeller, Dobosch Tarte, for example. She had obviously hiked a great deal around Marin. She loved to garden and was an excellent flyfisher. Last but surely not least, she knew an amazing number and variety of people all over California. One person I soon met through Anne was Emily Huntington, Professor of Economics.

In early July, Mrs. Alfred McLaughlin came over from San Francisco for her annual stint of stimulating summer school courses. Anne had known her for years and I had known her for perhaps two. As a result, we regularly met for a drink before dinner. Anne and I both had bottles of scotch and Mrs. McLaughlin was particularly grand with a bottle of scotch and a bottle of bourbon.¹

At this time, Anne was president of her unit of the League of Women Voters. As might be expected, the two often discussed the League, past and present. We talked about many other subjects: Chester Rowell, an admired friend of Mrs. McLaughlin's; current politics (Adlai Stevenson, Lyndon Johnson, and JFK were favorites); Federal Land policies; the war with Japan (Hiroshima and the Bomb, of course); and Vietnam.

¹Mrs. McLaughlin also brought predinner tidbits. I decided that these niceties sufficiently elevated the tone of things so that I stopped drinking scotch out of my toothbrush glass and graduated to cocktail glasses bought at now defunct Fraser's.

Mrs. McLaughlin told us about a visit to a Tokyo geisha house with Chester Rowell, when they both went to a conference in 1924. Now that I know a great deal more about Japan than I did then, I occasionally wonder if the geisha danced, sang, and poured sake or if, in the presence of these two imposing Americans, they confined themselves to matchsticks.

Then we descended to the refectory table or, as a friend called it, the refractory table, where there was often conversation about Colorado River rafting, trips to the Sierra, and the controversial Student Revolution. Several members furiously argued that the Revolution clearly showed the collapse of American moral values and that a man who wore long hair demonstrated his moral depravity.

Anne quickly perceived that my knowledge of Northern California seemed to be limited to the Berkeley campus and Telegraph Avenue as far as Haste Street (Cody's Bookstore). As for San Francisco, I knew nothing. She was appalled to find that anyone who had been born in the city, whose parents had been born in Northern California--one in San Francisco--and whose grandparents had arrived in the 1850s should be so ignorant. So she determined to rectify this appalling condition immediately, and she did it spectacularly. To this day almost my entire knowledge of Northern California is based on our trips.

In those days Anne had a wonderfully reliable black Buick. It never seemed to need the attention of a garage mechanic and apparently it ran on astonishingly little oil. And Anne drove it with the accuracy of a skilled taxi driver.

Lesson 1 centered on San Francisco. Often we went to see Anne's particular friend Amy Steinhart Braden, who fed us and talked with great vitality about San Francisco, the State of California, the state of the nation, and social work and politics.

Sometimes we went to restaurants, some famous, some unknown. Thanks to Anne, I learned that Sam's was unrivaled for sanddabs, that Enrico's was a fine place for drinking coffee and staring at people, and that the Auberge in San Raphael served succulent snails. I am certain that we drove to every quarter, every point of interest in the city, seeing buildings and views and eating.

Sometimes on Sundays we bought sandwiches and drove to Tiburon or Belvedere or Mount Tamalpais and then farther up to Ross or San Anselmo or to the town of Sonoma. At one point a friend of Anne's loaned us her house on Stinson Beach for ten days. That is where I learned about Anne and Oysters Rockefeller, as well as the coast as far north as Fort Bragg.

Wonderful to me were our trips to the Gold Rush country, usually overnight trips where in two hours we were in a different world. In those days the building boom of second and possibly first homes in the Sierra

foothills was only just beginning. There were no Wal-marts or malls. There were fewer superhighways, fewer automobiles, and of course, fewer people.¹

We whizzed through Columbia, Jackson, and Sonora on the way to Mokelumne Hill and later to my favorite spot, Volcano, in those days truly a ghost town. The climax of these wonderful excursions came when Anne took off a few days from the lab and we drove to Mammoth Mountain, Convict Lake, and down the east side of the Sierra to Mono Lake. We drove past the Sierra lakes and when I exclaimed at the number of trailers and campers, Anne said sadly, "This is only the beginning. There'll be more and more people. Too many cars. If these lakes aren't already full of algae, they soon will be." I used to think--and I still do--that if Anne had suddenly had to find a job, she would have been a successful tour guide; she was full of stories about the countryside and had an imposing knowledge of what was where and where the interesting turnoffs were.

In 1966 I went to Japan for two years. The last person I saw when I left and the first person I saw when I returned was Anne. Because I spent my summers in Tokyo until 1974, I missed most of the changes that were going on in Berkeley, except that I always spent a few days with Anne at her Lake Street apartment and learned from her what was going on at the Women's Faculty Club.²

By this time, George Dettner had re-entered Anne's life. They were married in 1979. They should have been married years before and would have been had it not been for well-intentioned but unnecessary interference. I can't do justice to George Dettner. Unassuming, genial, hospitable, and generous, he and Anne shared many of the same likes and dislikes. They must have felt that, married at last, they would make the most of what time remained. They entertained their many friends at their apartment on Russian Hill. On weekends they went to their house in Inverness. Over the years I spent many weekends in both places and learned even more about Anne's extensive cooking skills. In Inverness, George had created a beautiful garden. He moved mountains of brush every time they went there

¹It is a well-known fact that in 1996 the average American drives twice as much as his counterpart in 1960.

Apropos land less developed, in 1963 Willa Baum and I drove to Walnut Creek to talk to Paul Bancroft. We all sat under a tree at the edge of his orchard and I cannot recall seeing any house but his.

²At this time the Women's Faculty Club was rebuilt, literally from the ground up with new foundations; transformed from the somewhat shabby 1923 building to its present state. (The exterior of the building follows J.G. Howard's original design.) Anne was a member of the committee that voted that the club retain its separate and distinct identity, rather than merge with The Faculty Club.

and battled the everpresent, unflappable deer. Anne gardened and made quantities of marmalade, pickles, and relish until George decided he had had enough of this form of recreation.

They travelled. They went to Japan and Hong Kong, to England, Ireland, France, Italy, and Germany and they revisited favorite spots in the United States and Mexico.

George died in 1992.

As I write this she is ninety-one years old, living in the apartment on Russian Hill. Fog permitting, she can always look out and see the Golden Gate, the Marin Headlands, the bridge, and the encircling hills, western hills of San Francisco. She has survived flu, a badly shattered ankle, broken ribs, and a strangulated hernia. Unfazed she still walks around her neighborhood and downtown San Francisco. She still cooks, entertains, and reads widely, and she sees old friends, one of whom is Ruth Chance. She goes to New Hampshire and Virginia and a few years ago she flew to Munich for a month. In May 1995 the California Alumnae Resources group included her in their annual presentation of the WAVE (Women of Achievement, Vision, and Excellence) Award to five women who have done outstanding work in the community.

Years ago a friend, meeting her for the first time, said, "What a dear little dot!" I agree, but I amend it to, "What a dear little dynamo!"

Helene Maxwell Brewer
Professor Emerita of American
Literature and American Studies
Queens College,
City University of New York

April 1996
Berkeley, California

INTRODUCTION--by Lawrence I. Kramer, Jr.

Writing an introduction to Anne Dettner's autobiography reminds me of the problems the six blind men had describing an elephant that they could touch but not see. Each man felt that the whole was equivalent to the part he could touch. To one the animal was all trunk, to another it was all leg.

Anne Dettner's career has more parts than the elephant and those of us who have known only a few parts must take care that we don't repeat the mistake of the blind men and take the part for the whole.

I have known Anne for a quarter century in two of her roles--that of the knowledgeable volunteer who makes a difference and that of the hostess who provides a warm and comfortable setting for her guests, whom she has chosen with care, provides a wonderful meal and seemingly effortlessly evokes intelligent conversation to which everyone contributes while no one dominates.

In both of these roles I have watched Anne turn contention into discussion. Somehow fixed positions obdurately held become open to modification and amendment. She has a wonderful ability to focus on what is important. She doesn't make minor fusses but she can hold a position that she feels is important in the face of heated dissent.

Professionally, I worked with Anne on the reorganization of a major community agency composed of many autonomous units. All of the sub-units were older than the newly proposed city-wide merger. The potential for institutional warfare was enormous. In that contentious atmosphere Anne made possible the adoption of a plan that helped many organizations come together to meet the changed circumstances of funding, community needs and political reality.¹

Anne reads. She reads in her professional fields. She reads fiction, biography, history. She remembers what she reads and she can talk about books without being precious or pretentious. If a new and exciting novel has won the Pulitzer or the Booker Prize, Anne knows about it. She may or may not have read it yet, but she brings a lively curiosity to what she's read as well as to what she hasn't. I can remember dinner parties with other ROHO interviewees such as John and Jean May and Frank and Ellie Sloss in which discussion of books, current events and moral and ethical issues kept us late over coffee.

¹In Chapter X, Anne Dettner comments on this study of San Francisco settlement houses. She recalls that the reorganization was not carried out because resources were not available to fund the position of executive for the proposed new agency.

I have run on, but I have not touched upon Anne's career as a scientist, as an important administrator of the New Deal in California, as one who worked with Eleanor Roosevelt, and who was a friend of Alice B. Toklas. I have been privileged to know parts of the elephant, but not to know it whole. Anne Dettner is in many ways a Renaissance woman and to have known parts of her is reward enough.

Readers of Anne Dettner's oral history should keep in mind that when she came of age early in this century, women's career choices were severely circumscribed. If a woman had to work outside the home she was expected to be a nurse, a teacher or a secretary. Anne transcended these restrictions by achieving success in many other fields in a manner that combined grace with firmness.

Lawrence I. Kramer, Jr.
Chairman of the Board
Kramer, Blum and Associates, Inc.

San Francisco
April 1996

INTERVIEW HISTORY--by Gabrielle Morris

Interviewing Anne deGruchy Dettner was an exhilarating guided tour through the vicissitudes of being a woman of intelligence and ambition whose life has intersected with many of the major issues of the twentieth century. The memoir was commissioned in late 1994 by the UC Berkeley Class of 1931's series, University of California, Source of Community Leaders, to document her work in science, in an era when few women went beyond nursing or nutrition, and her work in politics and government in the challenging 1930s. Her oral history was featured in the League of Women Voters of the Bay Area study and exhibition commemorating 75 years of women's suffrage.

As Lawrence Kramer says in his introduction to this oral history, Anne Dettner is a Renaissance woman. She broke new ground as an administrator in New Deal social service programs and as a biochemist at the Lawrence Radiation Laboratory at the University of California at Berkeley in the fledgling years of artificial isotope research; all the while maintaining a lively interest in the good of the community, the world of books and ideas, and a host of devoted friends. The shenanigans of men that deflected these careers at crucial points only add luster to her competence, toughness, and generosity of spirit.

Born in 1905 to a cultivated family of San Francisco pioneers, Anne Dettner grew up among notable literary, musical, business, and political figures. Perhaps because her father died when she was four, perhaps because her mother had wanted to bear a son, young Anne early on assumed that she would be whatever she wished when she grew up. This assumption was no doubt enhanced by her years at Girls' High School, where she formed firm friendships with Ruth Clouse (later Chance) and Madeleine Lackmann (later Traynor), and the trio trounced the competition to become stars of the school debating society. Ruth Chance, too, has gone on to a distinguished career, as executive director of the Rosenberg Foundation; and Madeleine Traynor as well in community organizations, as wife of Roger Traynor, Chief Justice of California. The three friends continue to meet as their health permits.

Mrs. Dettner went to the University of California at Berkeley in 1922 intending to be a physician, but her first (and the university's only) biochemistry course convinced her that the basic structure of things was her field. Prevented from graduating with the Class of '26 because of course and scheduling difficulties, she was accepted as a laboratory trainee at Stanford's Lane Hospital, then in San Francisco, and in a few years became head of the lab. Taking a parallel track in the late thirties and forties through the presidency of the San Francisco League of Women Voters, several Depression relief committees, directorship of the National Youth Administration for California, and two troubled marriages, she returned to her professional studies in the late fifties.

Receiving her B.S. in biochemistry from the University of California at San Francisco, in a year that appears to have been lost in the inevitable maze of moving some Berkeley programs to the medical school, Mrs. Dettner completed her doctoral studies in the sixties and was well into dissertation research when an interpersonal contretemps arose and she resigned from the program.

She expressed reluctance to participate in an oral history at first, but when she did agree, Mrs. Dettner was most candid in describing the roadblocks she encountered, as well as the opportunities, and philosophical about their impact. "Looking back, I am amazed at how one thing has led to another in my life," is her view. Although her observations can be sharp as well as insightful, her basic cheerfulness and optimism came through in spite of such blows to morale as a fellow from San Mateo County who engineered the dissolution of a local relief committee she chaired while she was in Washington on New Deal business, and the big boss of the Youth Administration who fired her summarily with overtones of what today would probably be considered sexual harassment. Without their intervention, she might well have gone onward and upward in government service. Nonetheless she concludes that the work she has done in the community has been a continuing source of personal satisfaction.

In 1939 and again in the late 1950s, Mrs. Dettner was recruited by Dr. John Lawrence, brother of the well-known Ernest, to assist in research in the emerging field of scientific and clinical use of radioisotopes that he was conducting on the Berkeley campus, first in Crocker Radiation Laboratory and, from 1942 on, at Donner Laboratory. A distinguished Czech refugee arrived at Donner Lab in the early forties in the person of Bela (Bertram) Low-Beer, a clinical radiologist who quickly became a notable addition to the lab and, in 1943, to the biochemistry department at the medical school in San Francisco. Mrs. Dettner became his assistant, translator, and, before too long, his wife. Working with him in the lab was most satisfying, she recalls, except for his expectation that all publications would bear his name only. The joys and difficulties of their personal relationship were ended by Dr. Low-Beer's death in 1955, from the leukemia which Mrs. Dettner believes was due to his working around unshielded x-ray machines in Czechoslovakia.

When she returned to the Berkeley lab in 1960 after completing work on Low-Beer's scientific papers, it was to set up a bioassay facility called for by the Atomic Energy Commission, which she ran until 1972. Ignoring any disappointment over the thwarting of her doctoral plans, she settled into her responsibilities with delight. She was not looking forward to retirement as she approached the mandatory retirement age of 67, but an enlightened administrator turned on the sunshine by requesting that she stay on as a consultant.

The sun continued to shine on our Renaissance woman when Dr. George Dettner, a beau of her youth, reappeared on the scene. They were married and lived happily until his death in 1992, a lovely story readers must

enjoy for themselves. Throughout her professional work, Mrs. Dettner has found time for continued volunteer assignments for the League of Women Voters, United Way, and other community agencies. They "give you interest and stimulus when I had such a really limited personal life," she comments.

Five two-hour interview sessions were recorded with Mrs. Dettner between January and December 1995. The first two, focussed on her work with the League of Women Voters and National Youth Administration, were conducted by Gabrielle Morris, Regional Oral History Office (ROHO) consultant to the League of Women Voters 75th Anniversary Project. The third, dealing with her professional training and work in artificial radioactivity, were recorded by Sally Hughes, ROHO specialist in interviews on science and medicine. Lawrence Berkeley Laboratory support for the Dettner-Hughes session is greatly acknowledged.

Mrs. Dettner, petite and smartly dressed, would greet us in her handsome Russian Hill living room looking west to the Golden Gate and the Marin headlands and offer coffee and cookies. Each morning she would address the topics for the day with enthusiasm and lively anecdotes. When her interest did not flag, we were bold enough to ask if she would record an additional session on the history of her Moore family forebears who had come to San Francisco in the 1850s, to which she graciously agreed. By then Mrs. Dettner had begun to review early portions of the transcript and suggested other activities that might be included in the record. These were discussed in the concluding session on December 11, 1995. Gabrielle Morris recorded the two later interviews.

As often happens when an interview is recorded over a long period of time, a few aspects of Mrs. Dettner's experiences were discussed more than once. Some additional questions were sent to her in preparation for discussion, to which she prepared written answers and which inspired her to write a brief description of the nature of work on radioisotopes for the benefit of non-scientists. With Mrs. Dettner's agreement, the repetitive sections were combined, with particularly attention to preserving bits of information from each version. The revised passages are marked in the text. In some cases, Mrs. Dettner had gently smoothed over less-than-friendly episodes she had experienced. After further discussion, she agreed for the benefit of future scholars to leave in the manuscript the sense, if not all the details, of the realities faced by a woman of high expectations in the mid-twentieth century.

Working with Anne Dettner has been a wonderful learning experience for women of the next generation. It provides a welcome sense of continuity and pride in one woman's accomplishments that one hopes will inspire as well as inform younger women looking for their way in the world, as well as men wanting to know "what it is that women want." Many thanks are due to Helene Maxwell Brewer and Lawrence Kramer, both friends of Anne's of many years' standing, for providing introductions that offer insights into additional aspects of Anne's life. Special thanks are due to Ruth Chance, friend from their school days, for convincing Anne to sit for her oral history, and for providing valuable background information.

xx

Ruth's continued interest in ROHO and advocacy of our work let us know we are doing something right. Thanks are also due to Germaine LaBerge and Carolyn Rice for their assistance in preparing the final manuscript.

Gabrielle Morris, Senior Editor
Regional Oral History Office

April 1996
The Bancroft Library
University of California, Berkeley

CURRICULUM VITA--Anne deGruchy Low-Beer Dettner

April 1905 - born in San Francisco

1918-1922 - Girls' High School, San Francisco

1922-1926 - University of California, Berkeley

1927 - assistant to Dr. Harry Wyckoff, clinical pathologist & hematologist, Lane Hospital (Stanford Hospital), San Francisco

1928 - managed Lane Hospital outpatient clinic

1930 - married Earl Treadwell (UCB '26 Boalt Hall), divorced circa 1935

1932-1934 - president, San Francisco Center, League of Women Voters

1935-1939 - director, National Youth Administration, California

1940 - joined staff, Donner Radiation Laboratory, University of California

1941 - worked with Bertram (Bela) Low-Beer, newly arrived visiting therapeutic radiologist at Donner

1944 - married Dr. Bertram Low-Beer

1944-1958 - associate at University of California Medical Center (San Francisco)

1944-1945 - director, War Manpower Commission women's program for California

1951 - European sabbatical with Dr. Low-Beer

ca. 1954 - board member, United Bay Area Crusade

1955 - Dr. Low-Beer's death

1958-1959 - graduate studies in biochemistry at University of California, San Francisco

1960-1972 - director, bioassay facility, Lawrence Berkeley Laboratory, University of California, Berkeley

1964 - chaired United Crusade study on aging

- ca. 1966-1971 - chaired Golden Gate Neighborhood Centers Association
committee on citywide unification
- ca. 1972 - chaired energy study, League of Women Voters of San
Francisco
- 1973-1974 - consultant, Lawrence Berkeley Laboratory
- 1979 - married George T. Dettner, DDS, San Francisco
- 1992 - Dr. Dettner's death
- 1995 - Alumnae Resources WAVE Award

Regional Oral History Office
Room 486 The Bancroft Library

University of California
Berkeley, California 94720

BIOGRAPHICAL INFORMATION

(Please write clearly. Use black ink.)

Your full name Anne de Gruchy Dettner

Date of birth May 12, 1905 Birthplace San Francisco

Father's full name William Richmond de Gruchy

Occupation Business Birthplace Canada (Nova Scotia)

Mother's full name Clare Moore de Gruchy

Occupation Housewife Birthplace San Francisco

Your spouse George T. Dettner DDS

Occupation Dentist Birthplace San Francisco

Your children na

Where did you grow up? San Francisco (Belvedere in summers)

Present community San Francisco

Education BA, MS. University of California, Berkeley

Occupation(s) Biochemist, Lawrence Laboratory, Berkeley, clinical pathology Tech. Stanford Hospital; Director National Youth Administration, California

Areas of expertise Biochemical research, administration of public programs, e.g. NYA; Pres San Francisco League of Women Voters, chair many committees in area of welfare, social services.

Other interests or activities strong interest in literature and art, travel (Japan, many European countries)

Organizations in which you are active League of Women Voters, San Francisco Foundation, Alameda Resources.

I GETTING STARTED

[Date of Interview: January 9, 1995]##¹

Morris: You have a gift for long-term friendships. I understand you and Helene Brewer have been friends since you both lived at the Women's Faculty Club in the 1960s, and you and Ruth Chance have been friends since 1919.

Dettner: Oh, we went to high school together. Ruth is a marvelous person.

Morris: It must be wonderful to have friends of that long standing.

Dettner: Oh, it is and, you know, Ruth lives just around the corner from me. So we have access to one another very easily. [coffee and biscuits served]

Morris: As I said in my letter, I'm wearing two hats because we would like your interview to deal with your work at the Lawrence Berkeley Laboratory, where you must have been one of the first women on the professional staff; and also with your earlier experiences as president of the San Francisco League of Women Voters.

We are consultants to the League of Women Voters of the Bay Area on their project to document the seventy-fifth anniversary of the passage of the women's suffrage amendment. The project is very appealing not only for visibility of the league but to remind people how long women have been carrying their share of the burden in public affairs.²

Dettner: Oh, I think there is no doubt. That's very, very good.

¹This symbol (##) indicates that a tape or a segment of a tape has begun or ended. A guide to the tapes follows the transcript.

² Ruth Clouse Chance, *At the Heart of Grants for Youth, Bay Area Foundation History*, Vol. II, Regional Oral History Office, University of California, Berkeley, 1976.

Morris: And so it's a real opportunity to talk to some of the people that were active in the league's early years and to ask them to recall some of the events that the league took part in. We are also interested in the way in which people like yourself took their league experience out into the community, sometimes professionally and sometimes with other voluntary organizations.

Dettner: Well, my rather wide experience in the community stemmed entirely from my activity in the league. I was president of the league at the beginning of the Depression--'32 to '34 were my years. And during that time, the city launched a bond issue, \$6[SF LWV history says it was \$2.5 mill] million bond issue to defray the costs of helping the unemployed. And the mayor promised that if the bonds passed, he would appoint an absolutely blue ribbon, non-political committee to administer the program. The bonds did pass with a great deal of help from the league. The league campaigned for them heavily.

So, I was, I suppose because of my job, a natural to be on the committee and it was an excellent committee. The chairman of it was Justice M.C. Sloss, formerly of the California Supreme Court, and the other members were men of real standing in the community. Mrs. Paul Springer, who was the president of the PTA [Parent Teacher Association], and I were the only women on the committee. There were about eight or nine of us, I guess. And that simply led, for me, to a dozen things that I've done subsequently but really all go back to my activity in the league.

Morris: Good. Well, that's what I'd like to ask you to talk about.

Dettner: You wanted some documentation. I can't give you any because when I'm finished with anything, I throw everything away.

Morris: That's very efficient.

Dettner: Well, I couldn't do it. I've never lived in a place that was big enough to house all the papers that accumulate. So I just get rid of them and I have no sentimental feeling about any of these things.

Morris: Well, that's all right. We always ask interviewees if they have any relevant papers, just on the off chance that someone has kept a box in the attic.

Dettner: Well, I was appalled when you said the other day on the phone that you would like to see any written material I had. I don't have a scrap. I have much more in my days as director of the NYA [National Youth Administration] in California. For some reason, a lot of that has survived.

Morris: It would be good to look at those materials when we talk about your NYA work.

Dettner: Those papers would need to be correlated and interpreted but I can talk about it, if the Bancroft is interested in it.

Now that I have said yes to Willa's and your blandishments I'm perfectly willing to talk about anything. I mean to say--I haven't wanted to do this. I think it's an ego trip and I can't imagine who would be interested. But since apparently there is some interest and you want it and I've said yes, all right, I'll do it, I'm perfectly willing to go whole hog.

Morris: Very good. Well, if at any point, you think that we're taking up too much of your time or asking questions that you think are inappropriate, just say so.

Dettner: Oh, I would say so but I can't imagine that would happen.

II SAN FRANCISCO LEAGUE OF WOMEN VOTERS PRESIDENCY, 1932-1934

Morris: I don't know if you've ever read any of the finished products of the oral history office.

Dettner: Yes, I think I have. I read Mrs. Braden's.¹ She was a great friend of my mother's always. And I became a good friend of hers. And I think I know Mrs. McLaughlin's pretty well.² And as far as the league goes, I can't think of a thing I could tell you that Mrs. McLaughlin hasn't told you.

Morris: Other than that you were president in your own right so you have some things to say about what it was like being president.

Dettner: Well, the things that interested the league as local issues when I was president were chiefly two. One was the public dance hall situation, which had been going on for some time. As you probably know, and certainly from Mrs. McLaughlin's oral history you would know, that the San Francisco league employed a person, a social worker whose name was Georgiana Carden, to police the dance halls for the protection of young girls who attended.

That was a very serious project with the league. They felt very strongly about its importance. And that went on for quite a long time. I think Miss Carden retired during the time that I was president or around that time anyway. But she used to spend her evenings going from dance hall to dance hall. There evidently were a lot of them. And see to it that young girls were protected.

¹Amy Steinhart Braden, *Child Welfare and Community Service*, Regional Oral History Office, University of California, Berkeley, 1965.

²Emma Moffat McLaughlin, *A Life in Community Service*, Regional Oral History Office, University of California, Berkeley, 1960.

- Morris: That's amazing. How had that come to the attention of the league?
- Dettner: Well, apparently there were a number of abuses that had occurred and young girls were really not very safe going by themselves.
- Morris: Because this was a popular town for men on leave from their navy ships and other travelers?
- Dettner: Yes, and it had always been a very open city, of course. Very loose morals, I guess.
- Morris: That sounds like a project that the Young Women's Christian Association would have taken on.
- Dettner: They probably were interested in it, too. But I think in those days, it was primarily the San Francisco league, which still retained the name of the San Francisco Center. It had originally been just the San Francisco Center, I'm sure you know, and when the national league was formed it was a natural affiliate. But for a long time it was entitled the San Francisco Center of the League of Women Voters. I forget exactly when the Center name was dropped but it was some time after that.¹

You know, the first boards of the San Francisco league were wholly elitist. I mean, they really were. The women who started the San Francisco Center were the wives of men who were very prominent in business and the professions. And they had an awful lot of clout. They could talk to members of the board of supervisors and the mayor and anybody else with authority and say, "If you don't do it, my husband is not going to like that," which, of course, is simply absurd as a means of attaining objectives.

There was an episode during my presidency which was extremely interesting in that sense. We had, for the first time, in the first year of my presidency, decided to have a speaker for

¹In 1911, the year California became the sixth state to grant women the right to vote, the College Equal Suffrage League dissolved itself and reorganized as the California Civic League with local Centers throughout the state, of which the San Francisco Center was the largest. In 1920, when the women's suffrage amendment to the U.S. Constitution became law, the San Francisco Center (and the Civic League) joined the recently established League of Women Voters of the United States. In 1925 the name of the state organization was formally changed to the California League of Women Voters, although locally the term San Francisco Center League of Women Voters was used until 1949.

whom we could charge admission and have a night lecture open to the public and make a big event of it. The lecturer who was selected was Stuart Chase who had just published *A New Deal*.¹ He, of course, was prepared to talk about the economic situation and '32 was beginning to be a tough year. The lecture was a great success. We had it at the old Tivoli Opera House which was jammed, and it was considered a great contribution on the part of the Center to the information of people in San Francisco.

Of course, the other thing that was very important at that time was the fact that we were big enough and powerful enough to have speakers for lunches who were the same speakers that addressed the Commonwealth Club, to which women were not admitted.

Morris: Oh, my goodness.

Dettner: You see, we couldn't go to their lectures. We would depend upon our fathers, uncles, husbands to tell us what so-and-so had said and whether he was good or bad. So the Center had a policy of having the same speakers, if it could, for lunch meetings which were always held in the ballroom of the St. Francis Hotel. Our office was in the St. Francis Hotel, by the way.

Morris: That's pretty elegant.

Dettner: It certainly was. I tell you it was a very elitist group. And how I ever got to be president, I have no idea because I didn't really have any elitist qualifications. My father-in-law was a very important attorney in San Francisco, so the Treadwell name was well known. But, as I say, these women who were involved with it were the wives of very powerful men in San Francisco.

But what I started to tell you was that after the success of the Stuart Chase lecture, the board decided it would be a good thing to keep an eye out for speakers of this caliber. The next person Colston Leigh, the New York booking agency, offered us was John Strachey, and he would not have appeared until sometime late in 1934.

And so when the question arose, there was of course quite a bit of skepticism, shall we say, about it. But the board finally decided, to have him. But I said, "By the time the decision has to be made, it'll be a new board and a new president. And I don't think we should tie them to a decision that we make at this time. What I would suggest is that if you think we are

¹Stuart Chase, *A New Deal*, New York: The Macmillan Company, 1933.

interested in John Strachey, we should ask the agency to give us an option which we can exercise or not in 1934." That was the decision of the board. A new president took office and the board decided that they would have Strachey.

So, the men, who were the husbands of these ladies, went berserk at the thought of their wives participating in a presentation of John Strachey, this Communist who talked about people in the coal mines. And they did not wish to hear one word of it. So, do you know that they succeeded in closing the possibility of any hall in San Francisco at which he might have been presented.

Morris: Good heavens.

Dettner: I was still on the board because it was the custom at that time to retain the outgoing president on the board for at least another term; I don't know if that's still true or not. But I was still on the board.

A few of us were outraged at this performance and so we became sponsors for the lecture which was to be presented by a lecture impresario. The fact that some of us became sponsors of the lecture caused a great deal of, shall we say, concern among our fellow board members.

Morris: Oh, how exciting, yes.

Dettner: But this was outrageous, of course. The lecture was held at the old Hippodrome Theater which wasn't big enough and was packed. And all of us who had been sponsors, of course, turned up with our husbands and families and friends and it was a great success, and Mr. Strachey was about as inflammatory as a kitten.

Morris: I see. Why was he considered too liberal?

Dettner: He had been openly and vigorously acting in behalf of improved working conditions for British coal miners. He arrived in white tie and tails and he was the soul of good manners and he made a most innocuous address about the protection of workers in dangerous industries, and the improvement of working conditions generally.

Morris: And he was considered a Communist because he is in favor of--

Dettner: Helping the coal miners.

Morris: Helping the coal miners.

Dettner: Yes. Well, the way I became president of the league is related to that. I was at a meeting. As a matter of fact, I didn't join the league until, I think it was 1929. I ran into a friend of mine from school one day. It was Eleanor Sloss who had been a Fleischhacker and she married Leon Sloss. And she was a good friend of mine.

She said, "What's the matter with you? You don't belong to the Center. This is terrible. I'm going to put you in right this minute." So, I thought, well, why not? And I enjoyed going. And they had speakers all the time, of course.

Morris: Put you in? Did someone have to invite you to join then?

Dettner: There was no requirement to have a sponsor of membership, but actually most people who joined at that time did so at the suggestion of some friend.

One speaker was an Englishman who was telling us about conditions in Britain. He said that in Britain a program of affordable housing for the lower middle class, and I guess lower than that, had been sponsored by the government, but it was abandoned because the people who got the houses used the bathtubs to store coal. So the speaker said the whole idea was just absurd. Why should you give people bathtubs and so forth. I couldn't stand it. I rose to my feet and proposed a resolution in support of affordable public housing for the disadvantaged. I had expected some censure for such temerity but instead I was invited to join the Center Board of Directors!

Morris: That's what happens when you speak your mind.

Dettner: Apparently. Well, anyway, I did go on the board and enjoyed it very much and then--I can't imagine why they asked me to be president. I'd only been on the board about a year.

Morris: You would have been still in your twenties.

Dettner: Oh, yes. I was. It was '32 and so I was 27.

III GROWING UP IN SAN FRANCISCO

Life in the Moore-deGruchy Family

Morris: That's kind of exciting. Could we go back a little bit and talk about growing up in San Francisco?

Dettner: Certainly. Well, I was born in 1905.

Morris: Here in San Francisco?

Dettner: Yes, at the corner of Franklin and Pacific Avenue. When I was eleven months old, the earthquake occurred and my family were put out of that house, which they didn't own. As a matter fact, it had been leased because my father's business interests were all in the East and he intended that we would live in the East but he bowed to my mother's determination to have her baby in San Francisco.

Morris: She was a San Francisco girl herself?

Dettner: Oh, I'm a fourth-generation San Franciscan.

Morris: Are you a member, then, of Native Daughters of the Golden West?

Dettner: I never joined it, no. Or the Society of California Pioneers. But anyway, my family had to get out of the house because the city officials had said if the fire crossed Van Ness Avenue they would dynamite everything to the west. And this was just one block west of Van Ness. So my grandmother [Anna Moore] had taken a house in Belvedere for the summer and that was there waiting for us. So the thing to do was to go over there.

I almost didn't make it because the system for leaving the city was to go by truck out to the Presidio. And there get into a launch which would go around to the ferry building and there

one would get onto a regular ferry and go to Belvedere or any other destination. My grandmother, my uncle, who was an invalid because of rheumatoid arthritis and spent his whole adult life in a wheelchair, and my mother and I. My father was in the East. So we got out to the Presidio safely. My uncle in his wheelchair was safely transferred from the pier to the launch. The next was to be the baby buggy which contained me and a week's food.

Morris: For you or for the family?

Dettner: For me. And just as it was about to be transferred, my mother snatched the baby out, which was nice because the buggy turned over on the way to the [launch?]-So, I didn't have any food but I was alive.

Morris: Yes, that's a more important thing. Oh, dear.

Dettner: So, anyhow, we got to Belvedere and spent a few days in the very crowded Belvedere Hotel, until our house was declared safe. It was necessary to ascertain that the brick chimney had not been damaged.

Morris: Was the route to the Presidio and then to the ferry just during the earthquake or was that the regular schedule?

Dettner: Oh, that was in an emergency situation. And trucks came around and somebody got a truck for us to go out to the Presidio. It was all very informal and had to be handled [that way].

Morris: That was one time it was very handy to have an army base located in San Francisco.

Dettner: Indeed. Indeed it was.

Morris: Did you spend most of your summers in Belvedere while you were growing up?

Dettner: Right.

Morris: That was quite a community of San Francisco people.

Dettner: All San Francisco, all around us. And everybody did it on the same basis. I mean, they had a house. They went over about the end of May and they came back to town about September. Instead of going to school, I was taught at home so that my education was not interrupted by our residence partly in Belvedere, and partly in town.

Morris: Did you turn out to be the only child in the family?

Dettner: Not quite. My mother's oldest sister had married in England and a year after I was born, she had a little boy. My mother had wanted two children and hoped to have them at the same time to avoid the inconvenience of two pregnancies.

Morris: I see.

Dettner: But she didn't make it.

Morris: Did that mean she expected twice as much from you?

Dettner: Really true. That's an interesting comment, but that's true.

Morris: Was she somebody who was active in the San Francisco Center?

Dettner: Not a bit. My mother's interests were largely cultural. She had grown up as the closest friend of Alice Toklas.

Morris: Oh, really?

Dettner: Yes. And that was all a very interesting part of her life, of course. And she later became, well, she became very attached to a Dr. Lillian Martin who was a Ph.D in psychology from Germany. She was from the United States, but she took her advanced degree in psychology at the University of Bonn in Germany. She was concerned about the problems of the aging. My mother became frightfully attached to her and joined her professionally. I mean, my mother did a lot of the writing that they did together.

But my mother had, as she said herself, no education at all. She was plucked from one boarding school in Europe to another because after my grandfather's death, my grandmother's habit was to pack up her children and go to Europe for a couple of years. She put those children in boarding schools and she herself went to spas. Well, she had nine children in eleven years, and I am sure she needed rehabilitation.

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Dettner: My mother was, I believe, quite brilliant, but had never had the opportunity to find a scope for her ability. But she felt that she had [found herself] with Lillian Martin.

Morris: Well, and with her time in Europe, too.

Dettner: I don't think that so much. I think that developed her very much on the cultural side and she had a very natural tendency toward that anyway. When I was a child, as I said earlier, I didn't go to school. I was taught at home.

Morris: Did your mother do the teaching or did you have a tutor?

Dettner: My mother did a lot of it, but she had a couple of people who would come in on some of the technical subjects. The result of all this was that I flunked Subject A [English] when I went to Berkeley because nobody had ever taught me any grammar. My mother's feeling was that if you hear language spoken well, you're all right. What do you need with grammar? So I hadn't the faintest idea what a dangling participle was. I don't know yet and have various other little shortcomings of that nature. So they flunked me. My mother almost had a stroke when I came home and said, "I need ten dollars for the bonehead English course I have to take." [laughter] And I did at four o'clock, Friday afternoons for a whole semester with nothing but foreigners as my fellow students.

Girls' High School

Morris: Oh, my. That's fascinating. And Girls' High did not remedy--

Dettner: We didn't have any grammar. We had literature. By that time we were supposed to have had our grammar.

Morris: That's true. Well, there's a lot of that in education, the expectations that you have learned that subject somewhere else.

Dettner: Yes, exactly.

Morris: How did Girls' High come to be?

Dettner: To exist?

Morris: Yes.

Dettner: I don't know. But it must have been a very enlightened board of education that started it. It had quite a long history. I forget when it had started but I think very early in this century. It was going full blast when I was ready for high school and my mother thought that was the ideal placement. My mother had gone to nothing but private schools. She felt herself to be very ignorant and unprepared. She really made a fetish of public education, which is all right. I mean, I certainly agree. So that's what I was going to have from high school on. But a girls' high school I think she thought was fine because there wouldn't be any distractions of the kind that go on among young people who are of opposite sex.

Morris: No flirting between boys and girls.

Dettner: No flirting. Nothing like that. And of course, I thought it was marvelous because we had all these activities and they were all run by us, not by boys.

Morris: Was there a full student government?

Dettner: Oh, yes. Everything. And Ruth Chance and Madeleine Traynor and I constituted the debating team of Girls' High School and we were brilliant, absolutely brilliant. We wiped up the floor with countless other high schools.

Morris: Good. Did you debate the other schools in town?

Dettner: Yes, that was it. And I have, to this day, I tell you I don't have any documents but I do have an edition of the Seamen's Journal, which recites word for word everything that Ruth and Madeleine and I said in a debate with the boys of the Humboldt High School, which was a boys' night high school. These poor kids who went to it, I guess, worked all day and went to school at night and they were simply exhausted so we had no trouble mopping up the floor with them. Very unfair.

Morris: Well, that sometimes is the way the world is.

Dettner: I agree. I agree. But we also debated everybody else. We debated Sacred Heart. We debated Lowell. We debated everybody. And we almost always won.

Morris: Was the faculty mostly women?

Dettner: Mostly. Our debating coach was the French teacher whose name was Dupuy and he was interested in developing women's logic, I think, and their way of thinking. He was very stern and tough with us but he was good, as proven by the fact that we really did very well.

Morris: It sounds as if he was interested in women's effectiveness in the world.

Dettner: Very much so. But we didn't have very many men teach us. We had a Latin teacher who was a man. One. We had a physics teacher who was pathetic because he was a total failure in his field and had managed to get this job and all you had to do to get an A was not laugh at him.

Morris: Oh, poor fellow.

Dettner: Yes, awful, when I think of it now. Nice little girls can be brutal.

Morris: How many students were there?

Dettner: Let me see. Ruth could probably tell you much better than I. In the hundreds, anyway. I can't tell you exactly.

Morris: Four years?

Dettner: All four years, yes. But it was a marvelous school. We loved it, and the English teachers were particularly wonderful and really developed our interests and tastes in literature. No question about that.

Morris: It sounds as if it definitely had an academic orientation.

Dettner: Oh, it was. It was as academic as Lowell but only girls. And, of course, we loved the fact that we did everything instead of taking orders from boys about what part we could play in things. We did it all. And it was great. I think it developed all of us because I mean, many of us, Ruth and Madeleine and I have had interesting careers. But I don't think by any means we're the only ones who did.

Morris: Who else do you recall particularly from your years there?

Dettner: Well, Eleanor Fleischhacker was there and Edith Green who became such a marvelous mentor of cooks, you know. She had her own TV program in later years. And Marion Harron who had a distinguished career as a judge of U.S. Tax Appeals Court in Washington.

There were a great many Jewish girls. And I myself am half Jewish. My mother's family was all Jewish. My father not. And I think a great many of the Jewish girls were there because their parents really preferred private schools for them but they couldn't get in.

Morris: That seems really strange in a town as enlightened as San Francisco with so many distinguished Jewish families.

Dettner: I know. It seems ridiculous, doesn't it? But I think it was true just the same. Miss Burke's had a very small attendance of Jewish girls, maybe one or two in every class.

Morris: The token idea.

Dettner: Sort of, I guess. My mother, herself, had gone to Miss Lake's which was the predecessor of Miss Burke's and she, my mother, had spent so much time in Europe, as I told you, that her French was beautiful. And when there were visitors to the school, coming to inquire whether it was a good place to put their daughters, my mother was assigned the job of showing them around the school but she had to speak French the whole time because the implication was that she'd learned it right there.

Morris: Oh, absolutely. [laughter]

Alice B. Toklas and Some of Mother's Other Childhood
Companions##¹

Morris: Would you tell me about your mother's long friendship with Alice Toklas? I hadn't realized she was a San Franciscan.

Dettner: My mother was terribly concerned about her after the war, and Gertrude Stein's death. My mother frequently called Alice in Paris and had long talks which horrified Alice as a terrible extravagance. They decided to have some time together, as soon as possible. Alice didn't want to come back to this country ever again, and my mother didn't want to go to Europe ever again. She felt it would be so different after two wars. She hadn't been since before the first World War.

They decided that they would meet in the Caribbean and have a week or so together, but they couldn't do it immediately as Alice was Gertrude Stein's literary executor, with full responsibility for the disposal of all Miss Stein's outstanding papers. Alice was, of course, most painstaking about this responsibility.

By the time she wrote my mother and said she was now free and they could make their plans, my mother had just died. Alice was, of course, horrified and distressed, and so I promised her that before very long I would be coming to Europe and we would certainly have time together, and we did. As a matter of fact [Bela and I] went on sabbatical in Europe in 1951. While we were in England, Bela had occasion to go to Manchester for a couple of

¹The balance of Chapter III was recorded on July 14, 1995 in order to learn more about family life and notable persons in the Bay Area during Mrs. Dettner's youth. It is located here to maintain the chronological continuity of the narrative.

weeks and I thought, this is the perfect time to go to Paris. As an alternative to Manchester there could hardly be any choice.

Alice and I had a wonderful time for a couple of weeks. Then Bela was coming back to the continent and he and I were going on with our travels. I was simply terrified [really nervous] because Alice, of course, wanted to meet my husband and she wanted to be part of our European experience. I thought, if he doesn't like the ambience, it is just going to be sheer hell. He was always unpredictable about a new experience--it could be very good, or it could be awful. But when he met Alice, it was love at first sight and all my fears were unnecessary.

The following year Bela went back to Europe for an international radiology meeting and he took an extra week to spend in Paris with Alice. They had a marvelous time, went to the theater every night and did all sorts of things.

Morris: Do you think part of it was that Alice Toklas was such a very remarkable woman?

Dettner: Oh, I think undoubtedly that is true.

Morris: Particularly when she had been so important in your life.

Dettner: She would have been so upset if I kept making excuses that we can't see you again, we can't do this, we can't do that. Fortunately it worked the other way.

Morris: It sounds as if, from the Sutton book, that she and your mother had been friends from grade school?¹

Dettner: Yes, even before that, when they were tiny little things and they lived back to back on O'Farrell Street. They were not more than six or seven years old when they first knew each other. This friendship never finished, it was always there.

You spoke of the literary and artistic interests of the group that they played around with and you are quite right: these were all young women who were bored to death with the ordinary social goings-on of their families. They had much more varied interests--cultural interests of all sorts, mostly painting. More than literature or music, although Alice, herself was extremely musical. She was an excellent pianist--loved music. My mother hated music.

¹Linda Simon, *The Biography of Alice B. Toklas*, Garden City, New York: Doubleday, 1977.

Morris: Would Alice want to take your mother to concerts?

Dettner: No, I don't think so. It was just a taste they didn't share. But the two Joseph sisters who I mentioned, Nelly and Ada, were very much like Alice and my mother in their cultural interests. Nelly married a Frenchman finally, and went to live in Paris. Ada married a stableman [laughing] because she loved horses.

Ada was the first woman to have a sports car in San Francisco. She would tear around in it. She was a wild person, really. She also loved horses and that was why she married Harry Brackett who was a rough soul and didn't have a dime. My mother maintained her friendship with all of them all their lives, actually. As a matter of fact, when my father died, my mother and I were visiting the Bracketts in the Thousand Islands and they arranged for us to be rushed back to Boston. We, at the time, lived in Boston. My father's business interests were all centered there.

Four Generations of California Forebears

Dettner: Then you wanted to know about the family background. My mother's background, of course is German-Jewish, a tradition from which she parted early. As she explained it in later years, "Being Jewish is a state of mind and I don't share it, so I am not Jewish." She actually believed that. [laughing]

Morris: Did that upset her Jewish relatives?

Dettner: Terribly, of course. My family were in the upper echelons of Jewish society in San Francisco. People like the Lilienthals and the Slosses were the family friends. Many of the men were suitors of my mother, who would have nothing to do with them. Her sister, Jenny, who was very much a belle in that group-- Jenny's portrait is over there. I want you to look at it. She was the belle of the family.

Morris: Isn't she charming?

Dettner: Yes, she evidently was. She had a most tragic ending. She was beautiful, and she was evidently very charming and very social. She was engaged to marry her second cousin, George Moore, of New York. There were two branches of the Moore family. I will tell you a little more about that in a minute, because it is interesting.

Anyway, she was going to a party in San Francisco. She went upstairs to get dressed and she was mooning all the time that it was the last party she would have to go to without George Moore because he was coming out in a couple of weeks and they were going to be married. As she went on with her dressing, the wind blew a curtain across a gaslight fixture and the room went up in flames. She was so badly burned that she died. Really a terrible tragedy.

It was an awful tragedy for my grandmother, of course, because she was the one of my grandmother's children who most carried out the precepts by which she lived herself.

Morris: A properly brought up young lady with attention to society.

Dettner: Right. She was socially very much sought after, very gracious. She loved her social life which my older aunt--

Morris: There were three sisters?

Dettner: Three sisters. The oldest one went to medical school and would have nothing to do with the social activities. Finally she married an English doctor and lived in London until he died.

Then there was my mother who also had, as I told you, her own ideas about where she belonged. My poor grandmother really had only one daughter who fully satisfied her in every way.

Morris: The eldest aunt who was the doctor, what is her name?

Dettner: Paula. She married Doctor Wicksteed in London and lived in London as long as he lived. She was a dreadful, dreadful woman. Cruel, dissatisfied, ruthless to everyone including her only son whose life she literally destroyed.

Morris: Did she go to the San Francisco medical college?

Dettner: Yes, it was then called Cooper. That was where she went. One of the early women who did.

Morris: Did she ever tell you what it was like? How she talked her way into medical school and how she was treated?

Dettner: No, she didn't. She loved it and she enjoyed it and she got through it. She never practiced because, I think, when she had finished she had met Doctor Wicksteed and they went off to England and were married.

After my grandfather died, my grandmother loved nothing so much as taking the whole family to Europe. She would put the children in schools, and she herself would spend her time going either from one relative to another or one spa to another. I can see how she needed the spas because in eleven years she had nine children, only four of whom lived to be adults. The others were wiped out in various epidemics of which there were always many.

Morris: Here in San Francisco?

Dettner: Yes, scarlet fever, diphtheria. In fact, my mother had a life-long heart block because of the diphtheria antitoxin that was injected into the children. She didn't have diphtheria but she had a damaged heart all her life from it.

Morris: You forget how short a time ago it was that childhood illness killed so many.

Dettner: It was dreadful. In our cemetery plot in the Home of Peace there is a row of little marble pillows for the children who were wiped out in epidemics, just frightful.

Morris: Your mother got to go to Europe often as a child, but she didn't get to enjoy the traveling life?

Dettner: No, she loved it. My grandmother would put the children all in school. My mother was in school in Dresden, Paris, and Switzerland, all over the place, which is why all of them spoke excellent German and French all their lives.

Morris: They grew up multilingual?

Dettner: Yes. In fact, I hated having to learn French. I just hated it. When I was very young my mother would take me out for a walk and I would think, maybe she will forget. But invariably she would say, "*Alors, maintenant vous parlez français, n'est-ce pas?*"

Morris: That is marvelous. Tell me about how the Moores came to San Francisco.

Dettner: Yes, that you certainly must know. My grandmother's father, my great-grandfather whose name was Abrams, Samuel Abrams, lived in New York. How he got to New York I have no idea--if he was born in New York or if he was an immigrant to New York, I don't know. He came out in '50, not because he wanted to mine for gold himself, but he thought it was a great opportunity to supply miners with their various needs. In other words he was a merchant. I don't know my great grandmother's name. They were probably married in the late 1840s.

They came by ship from New York to Panama, across the isthmus on donkeys, and took another ship up to San Francisco. As soon as they arrived they went up into the Mother Lode and they lived at Mokelumne Hill. They couldn't stay there because my great-grandmother was terrified of those gentle Mi Wuk Indians. She was scared to death. Since she was pregnant all the time, it wasn't good for her to be scared to death.

So they came down to San Francisco and they lived on what is now the first block of Kearny Street. Market Street was a sea of mud. Where the Palace Hotel is, there was a school run by nuns and it was the only educational establishment in San Francisco, this was 1851. My grandmother Anna Abrams was sent there to school. My grandmother was the oldest of her siblings. She was the only one ready to go to school. She went to school by crossing over on a boardwalk that went across Market Street.¹ There she got what education she had; meager, but for the day I guess all right.

Morris: She got an early dose of Catholicism as well as--

Dettner: I don't know if they were very rigorous about that. They just really taught them to read and write. I don't know actually, but that was where she went to school. That was the only place you could go to school. Gradually, of course, they moved out of there and lived in various parts of San Francisco. My grandmother had several siblings, all girls except one. My grandmother was born in 1850.

Morris: She came across the isthmus as an infant?

Dettner: Yes. She was the oldest. She was young, but she still had a younger sister who also came across the isthmus on a donkey. The little one was terrified when the donkey's ears would twitch. I remember hearing that story.

My grandfather prospered and everything was fine, and he had all these children. Then his wife died and he married a young Austrian immigrant. He had a whole new batch of children. That is all another story the details of which I do not know.

In 1870 or '71 my Grandfather Moore, who was born in Germany--educated partly in Germany and partly in England--came

¹I have always found it interesting that my husband's (Doctor George Dettner) grandfather, Thomas Meany, an immigrant from Ireland, got the first contract from the city of San Francisco for paving Market Street, thus eliminating my grandmother's boardwalk that took her to school.

here because there was a firm in Birmingham, England, called Benjamin and Moore to which all the Moore boys went when their schooling was finished, to become part of the firm. They were in world trade. As one of my cousins has often said, undoubtedly they dealt in opium among other things. Their territory was all of Asia and Africa and Australia.

Morris: That must have been quite exciting.

Dettner: As I say, it used the talents of all the Moore young men as they emerged, my grandfather's cousins and sibling. My grandfather had only one brother, who comes into the story a little later. My grandfather had been, as I say, everywhere; South Africa, Australia, Asia, and finally in Japan. He felt that the auspices in Japan for establishing an office were very good. There had been no office there but they had them in the other countries.

My grandfather, of course, was the obvious person to run it, and he went back to England for briefing. He passed through San Francisco on his way and had letters to many people and went to a cotillion on almost the first evening he was here. There he met my grandmother. It was a costume party and she was dressed as the princess of Warsaw. He was swept off his feet, and he called on her father the very next day. My grandmother had said that she had liked Mister Moore very much, but under no circumstances would she go to Japan. The reason for that was that all the ugly ducklings who couldn't find husbands here were sent to Japan which was swarming with German men. They were certain to find husbands there, without any dangerous competition.

Morris: That is a fascinating tale. This must have been just when Japan was beginning to open up to the western world.

Dettner: Yes, to commerce, and an interest in the whole business of exports and imports.

My grandmother was firm. She did not wish to be considered in the category of an ugly duckling. She wouldn't have been, of course. There would have been no reason for it. But my grandfather was very philosophical about it. He said "My brother Leopold can go to Tokyo," and so he set up a branch of the business in San Francisco. They needed tea and spices, too.

Morris: What was your grandfather's name?

Dettner: Isadore Charles Moore. I.C. Moore. My grandfather, having been well educated in Germany and had some added college in England, was a very cultivated man. He loved the theater, and he loved music, and he loved all the arts. He was largely responsible, I

was a very cultivated man. He loved the theater, and he loved music, and he loved all the arts. He was largely responsible, I think, for the cultural interests of his children. He had a very pleasant and satisfactory life here, without a doubt.

Morris: Did you know him at all?

Dettner: No, he died in 1890 and I was born in 1905. It was in the decade of the '90s that my grandmother went most frequently to Europe and stayed the longest.

Morris: Right after his death.

Dettner: Yes.

Morris: Isn't there still a Benjamin Moore paint company? Is that a branch of the family firm?

Dettner: I don't know, I rather doubt it.

Morris: Leopold didn't want any of the ugly ducklings for a bride.

Dettner: He never married anybody. What he did do was survive the bombing of the *Berengaria* in World War I. He was one of the few people who got through it. He ultimately died in Brussels as quite an old man. Obviously much older than my grandfather was when he died. The *Berengaria* was in the first World War and my grandfather died in 1890.

Morris: Your grandfather started the Moore family in San Francisco?

Dettner: My grandfather, yes. He had a first cousin whose name is J. S. Moore, Joseph S. Moore, who stayed in New York and had a distinguished career during the Cleveland administration and had more progeny than my grandfather. These are my cousins, and it was to one of his children that my aunt Jenny was engaged, his youngest son, as a matter of fact. That is a huge family and many of them of my generation are alive still, and younger than my generation.

Morris: The Moore dry-dock and shipping family?

Dettner: No. That is no connection. The Moores in New York have all gone in various directions. In addition to the different kinds of businessmen are architects and writers. As a matter of fact, what used to be the Bellevue Hotel in San Francisco, which is just across the street from the Clift was designed by one of my Moore cousins from New York who had just got through The Beaux Arts (French academy) and had come here and got a job with a firm

He was one of the designers of the Bellevue which has just now been ruined by somebody who has taken it over. [They've] changed it totally and called it the Monaco. It is a sight. It is just hideous. I went by it the other day.

All those New York Moores are really delightful people. They are all cultivated people with a marvelous sense of humor. Just thoroughly delightful. I have always been very fond of all of them.

Morris: Did you travel back and forth and visit each other?

Dettner: Quite a bit. Yes, one of the Moore sons, Benjamin, the original sons, acquired an interest in a mine in Alaska. He and his wife came out frequently to see how their property was doing. His son, who was my generation, also came out with his bride. Now his children are not at all interested in it, if indeed they have any investment in it.

Morris: Is the mine still in the family?

Dettner: I doubt it. I don't know what happened to it. At one time apparently it seemed to hold considerable promise, but I don't know. The children are all in different occupations. I don't think any of them have ever been to Alaska. They have been out here, of course. They are really--all of them--delightful people, cultivated people. They have a delightful sense of humor.

Morris: Are there any cousins still in Germany?

Dettner: No, no I don't think so. One couple arrived before the war, during the Nazi period. They were not attractive people, interested chiefly in the acquisition of money.

Morris: Did your mother help them get out of Germany?

Dettner: No. Many didn't see any reason not to stay in Germany.

[One woman in particular had lived all her life in Hamburg and believed that any other place would be intolerable. My mother called on her and found her thoroughly disgruntled. Nothing was the least bit like Hamburg and therefore horrible. At last my mother said, "But you must feel great relief that you no longer need to worry about bombs." "Ach," she said, "*was ist nur eine kleine Bömchen* (little bomblet)?"

My uncle performed a great service by coaching many of these emigrés in English. His own command of German was still very

My uncle performed a great service by coaching many of these emigrés in English. His own command of German was still very good, and he enabled many of the emigrés to communicate more adequately as they went about the business of creating new lives. Many of those whom my uncle helped had been medical doctors in their own countries. As the United States did not have medical reciprocity with either Germany or Austria, the emigrés would have been required to take a year of rotating internship in order to qualify for the examination required of all aspirants for the M.D. degree. Rather than submit to these requirements, many emigrés chose the easier course of becoming podiatrists or practitioners in some other field less demanding than medicine.

The United States did have medical reciprocity with Hungary so that Bela Low-Beer had only to take the state board examinations, which he did with no difficulty.*

Morris: Did your grandfather help start some of the cultural organizations in San Francisco, do you know?

Dettner: In a sense, yes. He certainly was a supporter of any musical activities that went on. He was one of the supporters of the Mechanics Institute Library, a James Lick enterprise. My grandfather was interested in it from the very beginning. He had all sorts of cultural interests. I don't think he took a prominent part in any of these things, but he was a good supporter of everything he believed in. He certainly had a very full life as far as his own enjoyment of cultural activities is concerned.

Morris: I've read that there was a group of Jewish leaders who always chipped in and subscribed to start Mount Zion Hospital and organizations like that.

Dettner: That's right, that sort of thing. Yes, he may have been involved in more than I realize. I don't know. He certainly was a very community-minded person and sufficiently well off to be helpful financially.

Morris: Was there ever any sense that came down through the family that the Jewish community didn't get along very well with the Catholic and Protestant groups or that there was any friction between them?

*The bracketed material was added by Mrs. Dettner during the editing process.

Dettner: I think the Jewish community kept very much to itself. My grandmother certainly found it very difficult to be assimilated with non-Jewish people which, of course, is not true of any of her children.

Yes, my grandmother was very much committed to the customs, and the manner, and so on of the Jewish community that she had grown up in. It was difficult for her, I think, to adjust to non-Jewish people.

Morris: It wouldn't be until your generation when people like--

Dettner: My mother's generation, yes.

Frank Sloss; The Bohemian Club##

Morris: I've heard that you and Frank Sloss were close friends since childhood.¹

Dettner: Frank was four years younger than I. When I was in high school Frank was going to Pacific Heights grammar school. I have thought so many times of how he went attired as he was--a child going to school looking as he did, now would be absolutely mobbed. He always had beautiful clothes, and in perfect shape and everything complete, and had beautiful manners. He wouldn't last five minutes today. [chuckles]

Morris: Little boys wore coats and ties to school?

Dettner: Definitely, and knickerbockers, and hats, and probably gloves. Frank, I always was devoted to. Although, as I say, he was four years younger than I. He had a sister who was more my age, but she was never a close friend of mine, although she had a daughter whom I am very fond of. Frank had an older brother, Richard. He had two children of his own, a daughter and a son. The daughter I know very well indeed. In your outline you say that Frank and I had a common interest in literature and so on: we produced our own literature. We wrote poems to each other. They were terrific. I wish I could show you some examples but Helen, Frank's daughter, has them and I don't have copies.

¹See Frank Sloss's interview in *Bay Area Foundation History*, vol. IV, Berkeley: Regional Oral History Office, 1976.

One thing I think would amuse you--I was very fond of Frank's wife, but she really limited his life because she was never in good health. There were many things Frank couldn't do because Ellie wasn't up to them. He was, of course, very expansive himself in his interests. I was over in Berkeley and we were interested in everything that was being done with and by the radioactive elements. There was a rumor that tobacco contained polonium, which is a naturally radioactive element, and that it would be detected in the urine of heavy smokers.

So I said to Frank one evening when we were playing bridge or having dinner, "I have a project afoot that I would like to ask you to help me with." He said, "I couldn't help you on a project. I wouldn't be capable." I said, "Oh yes, you would." So finally he said, "What do I have to do?" I said, "You have to give me a twenty-four-hour specimen of urine, that's all." It engendered a whole give-and-take of poetry because we followed the process of this examination in poetry and exchanged comments and so on. Helen has the whole set or I would show it to you.

We had great fun doing things like that. Frank was always a challenge because he was so smart and so amusing and so cultivated. He was a wholly delightful person. I miss him frightfully, of course.

Morris: I can imagine. I had the opportunity to read the volume of his essays for the Chit Chat Club. I was delighted. He did one on Gilbert and Sullivan, which was very well informed as well as entertaining.

Dettner: He was really a connoisseur of Gilbert and Sullivan and also of real opera. He loved it. In fact, I used to go to the opera with him once every year because Ellie could hardly bear it. She got him to use several evenings to take friends so that she might be spared.

Morris: That was a good solution.

Dettner: It was excellent, yes. I never was an opera buff, but I always enjoyed being with Frank and we always had a nice time.

Morris: Did he start the Chit Chat Club?

Dettner: No. I forget who did, but it was a group of wits. The kind of people who started the Bohemian Club. You know, that was a dreadful thing, but Frank with all his brilliance and his

originality and all these qualities he had, was never invited to membership in the Bohemian Club.

Morris: That is amazing.

Dettner: Oh, it is just disgusting.

Morris: The Family was organized kind of as a response to that exclusion, wasn't it?

Dettner: The Family Club, yes.

Morris: When did that start to change? The Bohemian Club now--

Dettner: Now does have some Jewish members, but not an awful lot.

Morris: They have managed to avoid the woman issue as well.

Dettner: That they have done totally. Of course, we have with the Metropolitan Club, too, avoided the men issue.

Morris: How did you do that?

Dettner: We just put our feet down and said that we weren't going to do it. There was no basis on which they could force us to have men members. Actually, we do have men members, because the husbands of the members have privileges and can continue those privileges if they become widowers.

Morris: Really? That is decent.

Dettner: That is very decent.

Morris: But the Bohemian Club having started primarily as a gathering place for literary types--

Dettner: It has changed totally.

Morris: The business tycoons came along later, didn't they?

Dettner: Much. Of course, they brought in a lot of money. They very much changed the quality of the club. It is still, I think, delightful. George [Dettner] was a member of the Bohemian Club and enjoyed it very much. I haven't been near it for the last several years, but it is still, I think, delightful in many ways. The Grove itself is so beautiful.

Morris: Amazing experience.

Dettner: Yes, but they really are firm about no women. There are only a very few occasions that women are allowed in the clubhouse at all and at the Grove only at the picnic, which is once a year.

It is a beautiful place. They do so enjoy it. George certainly loved his membership. He got a great deal out of it. Of course, George started by playing in their orchestra. He was a clarinetist, and a good one.

Morris: Before he was a member, he played in the orchestra?

Dettner: Before he was a member he played in the orchestra. Then they invited him to come in as an orchestra member which is a special category of membership, rather limited. He said, "No, thank you. When I come in I will come in as a regular member."

Morris: Good for him.

Dettner: That is what he did a couple of years later. In the meantime, he gave up the orchestra because it took up too much time, more time than he could give to it.

Father deGruchy; Boston Interlude

Morris: That is wonderful. Tell about your father. Was he from an old San Francisco family too?

Dettner: That is entirely different. My father's background is Huguenot, French. They left in the persecutions from Brittany in the sixteenth century. They went mostly to the Channel Islands. My grandfather deGruchy was sent to Cape Breton Island in Eastern Canada to start a branch of the Bank of England. That is where my father was born.

My father went to Harvard as an undergraduate. On the ship going home--I guess the second summer he was in school--they did an arm-to-arm vaccination of everybody on the ship. My father spent the whole summer at home writhing in misery and having fevers--just a dreadful situation. He went back to Harvard in the fall and he kept getting one terrible cold after the other. The doctors in Boston said, "You can't live in this climate and you had better get out of here fast." He did, but not soon

enough to avoid having tuberculosis. He had pulmonary tuberculosis.

He went out to Los Angeles and he worked for the New York Life Insurance Company. He was very successful in what he was doing because apparently he could charm the feathers off a chicken. He had no difficulty getting rich old ladies to buy enormous policies. From time to time he used to come up to San Francisco. Through some purely social connection he met my mother, and they were married.

That was fine, although he already had TB but nobody recognized it. Then he had some extra money because of my mother, through her portion of my grandfather's estate--they went to live in Boston because he had all these business ideas that he wanted to develop. What his business actually was, was building financial support for various new businesses that were burgeoning all through the East.

Morris: What is now called venture capital?

Dettner: That is it. Eastern Canada was full of this, so was the Eastern United States. Boston was the hub for my father, of course.

My mother insisted that I had to be born in San Francisco. Officially they remained in San Francisco, but my father was in the East more than he was here. As soon as I was old enough, a year or so, we went to Boston to live. I was just four when my father died in Montreal. He was on a business trip.

Morris: What a sad thing.

Dettner: It was dreadful and totally unnecessary. My mother really did try to get him to take a year off and go to Colorado or wherever was suitable. She felt sure that he could lick this if they did. He was just up to his ears. He was evidently a person who thrived on excitement. He couldn't bear to think of dropping it and doing nothing.

Morris: That must have been a very exciting period in the business world.

Dettner: I am sure it was. We were in the Thousand Islands with this very same couple from San Francisco when the news of his death came--that he just collapsed in Montreal. We, of course, came steaming back to San Francisco as fast as possible.

Morris: I should think so. Your mother--was there any thought that she would remarry?

Dettner: She had many beaux and she sent them all on their way. She instead encountered Doctor Lillian Martin who became my mother's Gertrude Stein.

Morris: What was so intriguing about Doctor Martin's work?

Dettner: Doctor Martin had graduated from Vassar, then I don't think had any further education then that. She came West--I don't know why--with her sister. She became a teacher of chemistry at Girls' High in San Francisco. She was long gone from there when I was at Girls' High. She developed an enormous interest in psychology and read everything she could find about it. I don't know what else she did. I don't think there was any really formal training. At any rate, she got a job at Stanford as a faculty member in the department of psychology--if it was a department then. She taught what there was of psychology at Stanford for a number of years. She had a devoted friend whose name was Miss Fidelia Jewett who was a born and bred New Englander. She was teaching English at Girls' High.

Miss Martin, as she was then, decided that she wanted to go to the fountainhead and study psychology in Germany--although she was teaching at Stanford at that time. She went to the University of Bonn where she got an honorary Ph.D., then she came back to Stanford as a professor of psychology. When she had to retire from Stanford at age seventy-five she came to San Francisco and she started a well baby clinic at Mount Zion to teach mothers the right things to do about their infants.

Morris: The proper psychological approach to child-rearing?

Dettner: I think so. My mother who was at a loose end as I had just started high school, heard from some friend about "Doctor" Martin's work.

Childhood Adventures in Belvedere

Dettner: As I mentioned before, I had all of my grammar school education at home, which I hated. My mother taught me mostly, but she had a couple of other people come in and do some of the hard subjects.

Morris: Did many people do that in those days?

Dettner: A few girls I knew in high school had been dealt with that way. We all hated it.

Morris: Yes, little girls would like the sociability.

Dettner: Of course. My mother felt that it wasn't quite fair to keep me in this kind of isolation and then dump me into a big school because she had made up her mind that she would send me to Girls' High. She had very strong feelings about public schools. She, herself, had gone to nothing but private schools and she thought that they were terrible. To avoid too much of a jump, she took me first to the public grammar school in Belvedere.

She felt that I would be so overwhelmed that I wouldn't be able to stand it for very long. She said--now, she always called me Snooky--"Snooky, I will be over here. Any time you want to come home you come and tell me." I came in five minutes and I said, "Mother, you can go now."

Morris: Wonderful. A very independent youngster. What were you then, about ten?

Dettner: Something like that. I had organized a parade in Belvedere when I was six, for votes for children. California women had just got the vote [1911]. My mother was thrilled to death about that. I thought, no votes for children? This is highly discriminatory. We can't have that.

Morris: This was a question I had better put in now so we don't lose it--had your mother been active in the suffragist campaign?

Dettner: No, but she was all for it. She didn't do anything in it.

Morris: How come you knew about it enough to decide something should be done about votes for children?

Dettner: The conversation at home was always about issues, and the papers were full of the fact that women could now vote. My mother went to the polls to vote and I thought, why can't I?

Morris: Belvedere was quite a town for parades and festivals. Did you take part?

Dettner: Because of being surrounded by water, a lot of things centered around the water. Every year there was a Venetian Night. Little

boats went out all decorated and sailed around the Belvedere cove. I had a canoe from a very early age--of my own. There was a lot of boating. In fact, my family's idea of entertaining guests from San Francisco was to have a meal at our house and then go out in a launch.

Morris: Out on the water. That sounds lovely.

Dettner: It was a charming place.

Morris: It must have been a very different world before the bridge was built.

Dettner: Totally. We lived in the very first house as one came up from the little boat landing. There was a little Crowley launch that brought people from Sausalito over to Belvedere and to Tiburon.

Morris: Was that the Crowley tugboat people?

Dettner: Yes. It was more than a launch, of course. It was a two-deck boat, very small.

Uncle Samuel I. Moore

Dettner: My uncle from the age of eighteen had to live in a wheelchair because of rheumatoid arthritis, which the San Francisco doctors thought was attributable to the fact that he was born in the middle of all those epidemics. He was the only child who was breast-fed by his mother. They always felt that he had been infected.

Morris: By mother's milk?

Dettner: Probably, or by proximity to all the germs that were around the house. His illness was a progressive and miserable thing. My mother's part in his life was very important because she was determined that he not live the life of an invalid. She kept him active--not that he didn't want to be--but she provided all the stimulus for him to be open-minded and current with everything that was happening, and interested and active.

Morris: That is very modern of her.

Dettner: She was very modern. Under no circumstances was he going to be an invalid. It was true, he couldn't live without an attendant who was with him all the time, and he had to have a wheelchair. He had an office in San Francisco because they made him the trustee of the I.C. Moore estate. He then took a partner and they branched out into real estate to a certain extent. Actually he had a very full life. He never missed anything in the theater, or any luncheon speaker at the Commonwealth Club. When there were interesting events at the Greek Theater in Berkeley, such as an appearance by Sarah Bernhardt, we went as a family, staying overnight at the Whitecotton Hotel.

Morris: Did he live with you and your mother and grandmother?

Dettner: Yes, but we all lived with my grandmother. It was her house and she ran it.

Morris: In reading Miss Sutton's book, that seemed like a very congenial setting and there seemed to be a number of families that had that kind of extended group.

Dettner: I think that was very usual.

My uncle's ability to perform as a really fully-equipped human being was entirely my mother's doing. She was determined that although he was physically severely handicapped, he must live a full and sentient life. Fortunately he was by nature a great reader.

In those days the people from the symphony all used to come over and rent houses in Belvedere for the summer.

Morris: Do you mean the musicians?

Dettner: The musicians, including Maestro [Alfred] Hertz himself, who was the conductor. Our house was the place where they came for poker. There was a poker game every night all summer, which, of course, was wonderful. My uncle loved it.

Morris: He was an accomplished poker player, I take it?

Dettner: Yes, he was very good. I used to play pinochle with him by the hour.

Morris: Did your mother play poker?

Dettner: No, my mother didn't have any aptitude for anything like that, at all.

Morris: Did your uncle teach you to play poker, or just pinochle?

Dettner: Of course he did.

Morris: You can't really play two-handed poker.

Dettner: No, but he taught me the elements. I guess sometimes there were enough people around so I could play. I couldn't, of course, play with the musicians. I wasn't that good.

Morris: Your uncle sounds like a delightful person. Would you say he was kind of a surrogate father?

Dettner: He was one of the most delightful persons I have ever known. He never assumed any authority which would put him in conflict with my mother, but he was a tremendous influence in my life.

Morris: Would there be talk about what was going on in the symphony at your house?

Dettner: Not much although they were all characters. We knew a lot of artists, too. A number of them were living in Belvedere at that time, like Piazzoni, who did all those wonderful landscapes of California, whose daughter I still see now and then. Ralph Stackpole, the sculptor--they were all very good friends.

Morris: What a very warm and enriched childhood! Then you would come back to San Francisco in the winter?

Dettner: Yes.

Morris: After your grandmother died, did you keep the family house?

Dettner: Yes, in fact--when did they sell that house?

Morris: Was this the house on O'Farrell--

Dettner: Oh, no. They hadn't lived in that since my mother was a small child. My mother was married from the house they lived in at the time, which is on Washington near Gough. When I was a child they had pretty much given up the idea of having a house in San Francisco. There was a residential hotel called the Monroe on Sacramento Street between Franklin and Van Ness. That is where

they spent the winters. Their suite was always ready for them when they were ready to move in.

It saved a lot of bother. Before, when they had a house, everything was moved twice a year from the house in San Francisco to the house in Belvedere, from the house in Belvedere back to San Francisco. Believe me, the furniture was not modern. It was sturdy golden oak, very largely. I pity the poor men who had to move it, it was dreadful. But my grandmother liked to have things the way she was accustomed to having them.

Morris: Familiar, I can understand that. Did she have a loyal housekeeper who supervised these moves?

Dettner: Not any particular one, but a series of good ones always.

Dr. Lillian Martin's Influence

Morris: Were your mother's efforts on her brother's behalf--did she get some of her ideas from Doctor Martin?

Dettner: No. She had them all before she ever laid eyes on Doctor Martin. I think she felt that she had done her job with her brother by then.

My mother was completely absorbed in Doctor Martin. She was around, but she was mostly in town. They went to South America once. They were gone for almost ten months. I moved from where I lived, which was on Washington Street, and took an apartment in their building. Otherwise my mother would have felt very uncomfortable about [leaving] my uncle. I didn't move into their apartment, but I had my own apartment in the same building.

My uncle continued to live in the apartment--and his man. I didn't move into my mother's bedroom, in other words. I had my own apartment and I had my own housekeeper. I was running the NYA at that point and I was frightfully busy. But we had a marvelous time. I had lots of dinner parties for my uncle's friends whom he hadn't seem much of [for a while] because my mother was so totally absorbed that she didn't bother about such things much.

Morris: Was there a group of followers of Doctor Martin?

Dettner: No, not particularly. What she had at this point was what she called the Old Age Counseling Center which was in the Shreve building. I had to go there once a week myself--not that I was an old-aged person. It was the most distasteful duty that was ever assigned to me. In the first place, her attitude was always punitive and I would leave these sessions knowing that I was a toad and would never be anything but a toad.

Morris: You were going to her for therapeutic sessions?

Dettner: Yes. It would improve me somehow.

Morris: At your mother's insistence?

Dettner: Absolutely. I never would have gone near the place if I hadn't had to. She was also constantly at our house. After my grandmother died, she inherited my grandmother's bedroom and the whole bit.

Morris: That would be difficult.

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Dettner: She would tell my grandmother that she wasn't interested in the right things and she was not providing a stimulus for her son and on and on. I am so devoted to Gladys Thatcher, who I think is a marvelous person, but when she opened the Life Plan Center, I thought, This is going to be old Lillian Martin over again. It was a relief to find that the motions and the methods were entirely different.

Supporting Good Causes Then and Now

Dettner: I got to know Gladys because I was always interested, from the moment she started it, in the San Francisco Education Fund. I think that is one of the greatest things that has ever been done in San Francisco. I thought, a woman who did this can't be a replica of the late Doctor Martin. I just couldn't bear the idea. Then I got to know a little more about Gladys' project and became as generous as I could to it.

If Doctor Martin had provided that kind of help for people that the Life Plan Center does, she would have been very much more effective than she was. Gladys Thatcher's program [for

encouraging older people to develop new activities and interests] is absolutely excellent. If I weren't totally committed to the education fund, which I think is terribly important, I would be much more generous to the Life Plan Center; but you can't do everything. I do admire enormously what Gladys has done. She is a wonderful person.

Morris: You haven't felt a need to take some of their seminars or discussion groups or anything?

Dettner: Not so far. I don't rule it out, but I have been so busy. How could I? [laughing] They do have a series of brown-bag lunches at which they talk in a general way about their beliefs and so on. I have promised myself that I would go to one. So far I just haven't found the time. Gladys knows how I felt at the beginning and how I feel now. She is just driven all the time. I was disappointed that she wasn't able to be at our table at the WAVE luncheon [May 1955] because she is really a wonderful person. I knew you would all enjoy her.

Morris: She sounds like a dynamo.

Dettner: I think the education fund is one of the best things that has ever happened in San Francisco. Her impact on the schools is simply marvelous. The way that she has managed to stimulate support for it is terrific. The WAVE lunch had a little over a thousand people; it was the first time they ever had that many. They were thrilled to death. The San Francisco Education Fund lunch is way over a thousand people every single year. Everybody believes in it so strongly that we all really strain ourselves to be generous to it.

It is my favorite thing, absolutely. Except for one thing, which is the memorial that I started in the San Francisco Foundation for my husband.

Morris: That is nice.

Dettner: That is not so different lines. George, as a young boy, was a member of the Columbia Park Boys Club. That is a rather interesting story, if you have time. It is getting away a little bit, but I think it is worth considering. That organization was started by a Jewish man, a major in the army whose name was

Peixotto,¹ whose sister, Jessica Peixotto, was on the social work faculty at Berkeley.

He wanted a place for boys to learn self-reliance, make friends, acquire a sense of community, and have all kinds of advantages like musical study and so on. Then he would go around to people like my family and plead for support because these children were all just practically malnourished and there was no money. It was the deadest poor that you could imagine.

But it was not all like that. George's family weren't wildly prosperous; they were a straight middle-class family. George joined the Columbia Park Boys because he thought it was great. They had all kinds of sports and many other activities--and they had music. George didn't realize, I think, how much music was going to mean to him.

As soon as he was truly interested in music his father said, "You have to decide what kind of an instrument you want to play." After a series of experiments he chose the clarinet. His father went downtown and bought him the best clarinet you could buy in San Francisco, straight from Belgium, and arranged for lessons with the first clarinetist in the symphony.

There was nothing exceptional about George's experience. If there had been he wouldn't have wanted it, of course. Many boys came from homes like George's, while some were probably somewhat underprivileged. Maybe Peixotto wrung the heartstrings of the well-off people of the north side of San Francisco and got plenty of support for what was portrayed as a charitable enterprise.

Morris: He didn't like the Boy Scouts?

Dettner: I don't know. Anyway, George wasn't a Boy Scout. He was definitely a Columbia Park boy. For him it was a tremendous experience, including walking trips to considerable distances, camping out, as well as all the San Francisco programs.

Morris: Is the memorial for the Columbia Park Boys Club?

Dettner: No. George very wisely did not leave any money to them. A year or so before he died he said, "I would like to go out and see them. Could we drive out?" We did. They are still in the same location but it is very much reduced in space. They had a huge

¹Ernest Peixotto was also a well-known muralist in the 1930s.

lot of space before, but they had given that up. Altogether he was favorably impressed with what he saw, but it is a very limited operation. My own feeling, which he and I never discussed, but I feel it strongly as a result of the boards and things I have served on at various times, is that agency boards change and policies change with them. Ten years from when you started, they may be doing a totally different kind of thing.

If George had said he was going to leave a lot of money to the Columbia Park Boys, I would have tried to discourage him and say leave it to the San Francisco Foundation, but he never talked about what his bequests were going to be. I didn't know what he left money to. I think he made some mistakes. That is neither here nor there. My feeling was, I would like to assist the kind of programs that he found so enormously valuable, and they do exist, of course. The agency is immaterial.

I went and had a long talk with Bob Fisher at the San Francisco Foundation. He is one of the most delightful human beings I have ever met. He understood perfectly what I was getting at. I drew up a protocol of what I would like to see done, which would be to assist programs, wherever they were offered, that teach the things that the Columbia Park boys had a chance to learn. That is the way it is. It started on a very small basis, which I thought Bob Fisher was extremely nice to be enthusiastic about.

Martha, my stepdaughter, was just delighted with it. I, myself, started a special investment account away from the marital trust which I have. There is nothing in it but my own money. It is largely devoted to growth stocks. I don't take a penny out of it. The whole works will go to the San Francisco Foundation for the memorial. This pleases me very much. In fact, I was so disconsolate for heaven knows how long. Suddenly I got this idea and thought, I think I would feel better, and I do. I just love this.

Morris: Yes. It is something, as you say, that is growing.

Dettner: My broker at Dean Witter is the nicest man. He is somebody with whom George had done a lot of business over the years. He had absolute confidence in him, but he is also extremely nice and he was very fond of George. I know he would do his best for any client, but I think he has a special wish to have things work out well because of George. What he has done already is miraculous. I am very happy about that. It is to keep alive in the community the things that were so valuable in George's life and in the

lives of hundreds of other young people. You can't expect it in a particular agency which may change everything around next year.

Morris: The creative spark kind of thing, it sounds like.

Dettner: That, of course, exactly where the San Francisco Foundation is so valuable.

Morris: The first time I think I heard your name was from John May.

Dettner: John was an old, old friend.

Morris: From before he went to the San Francisco Foundation?

Dettner: Yes. I met him first when he was in the OPA [Office of Price Administration] with Frank Sloss. It was through Frank that I met him. There was a lunch room in the Furniture Mart where we "government clerks"¹ used to go. One day John was having lunch with Frank and that is how I met him. I was so astonished when I met him because I knew that he was the husband of a girl whose mother I had known very well. She was on the staff of the Community Chest in the days when I was on the board of the Chest.

This child was very unusual. I would have expected her to marry a starving poet and live in a garret. That is what she was really primed for. Here was this very conventional-looking young businessman. I thought, that can't be Margarita's husband; but it was. That marriage didn't last, but anyway that is how I knew John. As soon as I met him and realized that he was Margarita's husband, we all became fast friends.

Morris: He may not have been a starving poet, but in a way he took something that nobody knew quite what to do with at the time--the community foundation--and he made it a very--

Dettner: That is quite right. He was very good at his job, no question.

Morris: I think he found it very satisfying.

Dettner: Oh, I know that he did.

Morris: It sounds as if you, and he, and Frank would occasionally come up with ideas for the improvement of San Francisco.

¹Richard Neustadt's term for all of us who had federal jobs to help the war effort.

Dettner: Occasionally, yes. When I realized that this was Margarita's husband, I used to see a great deal of the Mays. I was always very fond of Margarita when she was a child. Margarita, from the time she was in high school, ran the house for her mother's benefit. She never had a minute to herself and never any decent clothes. She had a brother for whom everything was sacrificed so he could go through medical school. Margarita got the short end of everything.

Morris: That is a pity.

Dettner: It was very sad.

First Acquaintance with George Dettner##

Morris: I'd like to know more about Dr. Dettner.

Dettner: The person I had always wanted to marry all my life was my last husband, George Dettner. But my mother put a stop to it.

Morris: Good heavens. That sounds quite Victorian.

Dettner: Well, God knows why, except that she thought, I learned later, she thought George was too young and too provincial. As I frequently said, those are not conditions which are necessarily permanent.

Morris: Oh, dear. Younger than you were or just young and immature?

Dettner: Oh, no. He was six years older than I but we were very close to one another. We were really devoted. But on the other hand, he behaved like an iceberg and so I was convinced that he had no interest in me beyond going to football games and the movies and things like that. And I was very restive under the influence of my mother and Dr. Martin, who was, I thought, just simply awful.

Fifty years later when George told me this, I said, "Why were you so inarticulate?" And he said, "Well, because your mother made me make a solemn promise that I would not approach anything other than just nice, casual friendship." It took us an awfully long time, but we were married exactly fifty years after we should have been.

Morris: How frustrating.

Dettner: Of course, you do what you can. Of course, in the meantime, George had married twice, too. And his second wife was in a nursing home; she lived for about four years after we began to see each other again. He was running his office without any help, so I volunteered to go down and do what I could to help. I went every Wednesday morning and took care of billing and other odds and ends, then we'd go to lunch.

Morris: How had you gotten to know each other?

Dettner: He was a dentist, and my family had been going to a dentist who was about as inadequate as possible. No matter how one suffered, he would say, "I think we'll let it come to a head." Finally, my uncle had a situation that was truly unbearable. So somebody said, "Go to the Hardy office. That's where they really know what they're doing."

George had just recently joined them as an associate because the Hardy office had--this is funny in itself. George was, among other things, an avid tennis player. He was finished school. He was the top of his class and he just couldn't get himself settled down. And he thought he might go with one of the lumber companies to Susanville or somewhere. And we have laughed about it many times because I've said, "How would you like to be married to a waitress from Susanville? which is what would have happened to you, of course."

Anyway, Dr. Hardy kept calling--George was living at home with his family and his mother would answer the phone and say her son wasn't in, she was sorry and she would have him call and he never did. He finally did and Dr. Hardy said, "I'd like to talk to you. We need an associate in our office. I've called the dean and he recommended you as the best qualified person in the class and so forth. I'd like to have you come down and talk with me if you will." So George obliged him.

When he got there, Dr. Hardy said, "Why didn't you call me back all that time?" And George said, "Well, I'm sorry but I was playing an awful lot of tennis." And Dr. Hardy said, "Tennis? Did you say tennis?" And George said yes, rather shamefaced. And Dr. Hardy said, "Doesn't my name mean anything to you in connection with tennis?" And George said no. And Dr. Hardy said, "I'm the national doubles champion." So then and there he took George out to the California Tennis Club. He said, "I have to see if you're any good," and he joined him up as a member. And he came to work the next Monday.

Morris: And they played tennis happily ever after.

Dettner: Ever after. So, in the course of time, my uncle had a serious dental situation and one of his friends said, "Go to the Hardy office. They really know what they're doing." So he went and was very impressed and said he would like to continue as a patient. They said they'd love to have him and, let us introduce our new associate. And that was George. So pretty soon my mother was a patient and then I was a patient. So that's how it all began.

Morris: It sounds as if he was quite dashing.

Dettner: He was. And he was a truly delightful person in every possible way.

IV UNIVERSITY OF CALIFORNIA AND STANFORD EDUCATION AND TRAINING

Continuing Friendships, Science Studies, Part One

Morris: Did any of you think of going to an all-girls' college when you finished Girls' High School?

Dettner: No.

Morris: Isn't that interesting?

Dettner: No, we all went to Berkeley, every one of us, at least all three of us. A lot of the girls we had known well in school didn't go to college at all. A lot of them married very young and--well, I don't know--a few went to Mills. Yes, Ellie Heller, for instance, went to Mills and Ellie Fleischhacker went to Mills.

Morris: So did your friendships continue through going to different schools?

Dettner: Well, more or less. But we more likely picked them up later when we were all young married women and doing things together.

Morris: Did you live here at home in the city and commute to Berkeley?

Dettner: No, I lived in Berkeley. My mother was terribly anti-sorority and I don't know if I would have been bidden to one anyway but I wasn't, and I didn't go to rush parties and things because I knew that it was senseless. I mean, my mother would have said absolutely no.

Morris: And you weren't interested enough to make a--?

Dettner: No, I didn't care. I didn't care. So I lived in various houses and usually with some friend from school, from Girls' High whom I'd known and, yes--in fact, the last year or so of my undergraduate life I shared an apartment with Marion Harron who later became a judge on the tax appeal court and went to Washington. Spent her whole life in Washington. Never married. She's dead now.

When I went to Girls' High first, she was just back in school after having recovered from typhoid. She was a year or two ahead of me.

Morris: Oh, my goodness.

Dettner: She had short-cut hair because she'd lost all her hair. And it was remarkable because nobody survived typhoid. But she had. I never knew anybody who had more willpower in my life. But she was sort of the idol of a lot of the girls, me among them. We thought she was absolutely marvelous.

Morris: When she was at Girls' High, had she already set her eye on law school?

Dettner: Oh, yes, yes. She had a sort of equivocal background. I don't know quite what it was. But her mother was a saleswoman at Nathan Dohrman's. They had a very limited life and the mother was an extremely difficult woman. And Marion had all this tremendous drive and leadership and all of the younger people of Girls' High just adored her. According to one of the biographers of Mrs. [Eleanor] Roosevelt, the one who wrote the really detestable book, which I disliked enormously, Marion was an out-and-out lesbian. Of course, we didn't recognize it at the time. We wouldn't have understood it at all.

Morris: Well, you wouldn't have mentioned it either.

Dettner: And we wouldn't have mentioned it had we understood it. No, of course not. But apparently that was so. She had a number of liaisons in Washington in her judgeship. But she had a brilliant career. She was a very bright girl.

Morris: She would have been appointed by Franklin Roosevelt to--?

Dettner: Yes, she was. The tax appeals court.

Morris: Since he was a dominant influence through all those years.

Dettner: Oh, indeed. I'm just reading a book now, the new one which I think is absolutely excellent. It's called *No Ordinary Time* by Doris Kearns Goodwin.¹

Morris: Did you study political science at Cal?

Dettner: No, no. I went in as a pre-med student; I was sure that I wanted to be a doctor. I continued with this feeling until my second year, I guess, when I took the only course in biochemistry that was given at that time because there was nothing to biochemistry that wouldn't go into one book. I was absolutely fascinated, and I realized that it was not the clinical aspects of medicine that I wanted but it was what was in that book. But there wasn't any biochemistry major at that time.

So I had an assorted, mixed-up major in biological science and chemical science. I took all the organic chemistry I could and a lot of biology. And that was why I did not graduate with my class because when it came to it, I didn't have the right units in the right places. It was a technical thing. I could have gone back for another year and done it, but I wanted to get a job. My mother thought it was high time I got a job.

Morris: Did she? What did she think of your wanting to be a doctor and, later, a biochemist?

Dettner: I think she would have been happy had I chosen anything other than a scientific field, but she would always have encouraged any real interest, even if it was far removed from her own interests which were largely cultural, and to a great extent psychological.

Morris: Even though she had lived as a will-o-the-wisp?

Dettner: Well, that's exactly why, I think. So I had an awful time getting a job because I wasn't finished in anything. I didn't have a B.A. I didn't have anything. And my mother was of no help. "You need to go around and see what you can find." So I went to the Hooper Foundation. I went all over the place. Well, I was not prepared to do research, of course, without a B.A. at least. So finally, at Stanford Medical School, which used to be here in San Francisco, as you know--

¹Doris Kearns Goodwin, *No Ordinary Time* (New York: Simon and Schuster, 1994).

Stanford Hospital Hematology Laboratory¹

Morris: The medical school was there on Webster Street.

Dettner: Yes, the medical school and hospital. By some God-given piece of luck, I ran into Dr. Wyckoff, Harry Wyckoff, who was a clinical pathologist and he was also a very gifted hematologist. And he seemed to think, well, I didn't have much to offer, but maybe there was some hope. So, he said, "If you'll come in without salary for a few months and learn the methods of a clinical laboratory, which we can teach you, we might find an opening for you."

Well, I was fascinated, not so much by learning the do's and don'ts of a clinical laboratory, but by the fact that Dr. Wyckoff apparently recognized that there might be something in here [taps her head] beyond what I could present on paper. And he let me work with him, which was largely in the evening, on his own research which involved hematological subjects. Subsequently, much later, I was in Stanford as a patient one time and Dr. Wyckoff used to keep me entertained by coming in the evening with a microscope and his slides of all the latest patients and we would go over them one by one.

Morris: Isn't that marvelous.

Dettner: This was much later, as I say. I was a married woman but I was ill. Yes, I'll come to my illness later. But anyway, he was the only person who apparently saw some promise in this lump of unmolded clay.

Morris: Well, he must have been delighted to find somebody as fascinated with his subject as he was.

Dettner: Well, I just adored working with him, of course.

Morris: It's not everybody who is entertained by the vagaries of blood samples on slides.

Dettner: True, true. Well, we used to work until about nine-thirty. He would say, "Well, come on. Let's go and get some dinner." So, we would march down to Fillmore Street, which is only a block

¹For more detailed discussion of Mrs. Dettner's professional career, see Chapters VII and IX.

away, and he would eat a bloody steak and a whole order of fried potatoes and I would have something other than that, of course. Then we would part for the night. That was that day's work. And I was just fascinated and absorbed. I loved every minute of it.

Morris: Well, this sounds like a wonderful tutorial.

Dettner: Oh, yes. So, finally, I mean, after I was trained to know what you do in a clinical lab, I was employed at \$75 a month. And then he sent me downstairs to run the outpatient clinical lab which meant that I was training technicians as well as taking care of the patients. It was all great and he made it a wonderful experience. It also involved a \$25 a month increase in salary!

Morris: I should think so. I should think so. Who taught the one class in biochemistry at Cal?

Dettner: Dr. Schmidt, Carl Schmidt, who is long since dead, of course. There was no department. It was just a course interjected into the pre-med curriculum. But as I say, in 1926 when I should have been graduating, all of a sudden I didn't have the right units in the right places and I couldn't possibly be given a degree.

Further Studies

Dettner: So, I didn't go back until '39 when I was finished with the NYA. Well, I was too busy to go back before, much too busy. But after NYA I was completely at a loose end. I didn't know what I was going to do next. And I thought, the best thing I can do is go back and get my bachelor's at least. So I did. It took one semester at Berkeley and I was finished.

Morris: That was all it took after fourteen years?

Dettner: That was all it took. But I was amazed because with the greatest of ease I got nothing but A's. I mean, maturity is such a difficult thing to come by when you're as young as you are as an undergraduate. But when you go back with a purpose, there's nothing to it.

Morris: Plus the fact that you'd had all that experience at Stanford Hospital.

Dettner: True. But I took one course in psychology which I'd never had and which really wasn't my main interest. And I forget what the other things I took were, but I had to get so many units in something.

Morris: And when you went back, it sounds like there wasn't any problem about putting together a package to give you the necessary credits.

Dettner: Not at all. In one semester I did it.

Morris: So what was the bachelor's degree in?

Dettner: Oh, it was a B.S. in general biology, yes. Biological science. Then later, of course, I took an M.S. in biochemistry.

Morris: So we'll save that for another day because I know Sally Hughes is looking forward to talking to you about your professional career.

V DURING THE GREAT DEPRESSION

Unemployment Relief Bonds, 1932

Morris: Right now I'd like to circle back again to the period when you went into community service. How did you get interested in becoming active in the League of Women Voters?

Dettner: Well, as I said, the time I spent in the league was enormously influential in what happened later. And I've often thought how interesting it is how one thing leads to another. I think I've told you at the beginning that the mayor had said, the mayor of San Francisco had said, "If the bond issue for the relief of unemployed people passes, I will appoint an absolutely blue ribbon non-political committee."

Morris: The mayor was--?

Dettner: It was Rossi [Angelo Rossi], whose daughter I'd gone to high school with, by the way.

Morris: Oh, wonderful.

Dettner: Eleanor Rossi. Well, anyway, he did. He kept his promise and the chairman of the committee was Judge Sloss, than whom nobody could have been better. And it was truly a blue ribbon committee. There were two women on it. I was one because of the league and the other was the president of the PTA, Mrs. Paul Springer. It was really an excellent committee and we did a good job, I think.

Morris: Had the league been active in helping pass the bond issue?

Dettner: Yes, the league had campaigned for it. That was the reason--so I mean, it was quite a natural thing for him to appoint the president of the league.

Morris: Did you go out door-to-door on that campaign?

Dettner: No, we issued news releases and campaigned and we had meetings to inform the public.

Morris: In those days, did you have to do a study and determine that there was a need for additional funding?

Dettner: Well, we did a study on everything except an emergency like this. I think we--yes, we did spend some time considering it as against other possibilities and in terms of what was happening to the population. But it wasn't two years of study obviously.

Morris: Were there anything particular about San Francisco's needs? Such as more people moving into the city?

Dettner: No, I don't think so. It was the population that was here and was just on its uppers. And there had to be help for it. And the private charities weren't equipped, of course, to provide the help that was needed, not by a long shot. And until the New Deal programs came in, something simply had to be done. And at that time--

LWV Hosts Presidential Candidates, 1932

Morris: And this bond issue was the same year as Roosevelt's election.

Dettner: Yes. Thirty-two. I had the privilege and honor of introducing FDR at his only campaign appearance in San Francisco in '32.

Morris: Oh, that must have been quite an experience.

Dettner: To my amazement, the Commonwealth Club joined with us in having this meeting. And of course, I had a little trouble with the league board because of our non-partisan position. But when we said, "But we'll have the candidate of every major party. We'll do the same thing. How can anybody possibly object?" And so, the board decided, yes, we could do it and it was obviously a wonderful way of enhancing the league's position.

Morris: So this was an early candidates' night. Did you have them all at the same time?

Dettner: No, no. We had a huge thing at the Palace [Hotel], the ballroom in the Palace. It was packed. And the Commonwealth Club joined us in doing it but did not wish to take a leading part, which was fine. So, I was able to say, at the outset, that this was one of a series of meetings which would enable all the major candidates to appear before us and give us their programs and so on. And we did.

Herbert Hoover declined to come and sent Ogden Mills.

Morris: Somebody in his cabinet?

Dettner: Yes, he was somebody very important. Not in the cabinet, necessarily, but he was very important in the Hoover administration. Ogden Mills. Yes.

Morris: That sounds like a good San Francisco name.

Dettner: I think that's right. Anyway, he came and Hoover abstained [from] the event, which was very foolish of him. And my mother described how awful it was when Hoover did appear in San Francisco. He drove along all the major streets and my mother said there was a dead silence. It was really very chilling. And he didn't make an appearance until right before the election, I think. And then we had Norman Thomas as the candidate of the Socialist party. And that covered all the parties that were considered major.

Morris: Wonderful. What was San Francisco's reaction to Roosevelt and to Norman Thomas?

Dettner: Well, at the meetings everybody was very enthusiastic. I mean, the Roosevelt meeting was just packed and there was a lot of enthusiasm. And Ogden, yes, it was Ogden Mills. That was his name. Nobody was very stirred by him, I think.

Morris: You said he was a pompous kind of--

Dettner: Oh, pompous and a stuffed shirt of the first order.

Morris: Even though, you know, in hindsight, people find out that Hoover was also trying to do something about the unemployed.

Dettner: Yes, but he wasn't doing much.

Morris: Yes, it wasn't working.

Dettner: And what had he done to the [pension] marchers. He'd turned the army on them. It was dreadful. And I don't think he had any sympathy at all. He just felt that the whole thing should have been managed differently and we should have supported industry. I mean, the country should have supported industry more and none of this handout stuff. And of course, Norman Thomas had his constituency which came largely out of interest rather than [likelihood] of support.

Morris: He wasn't really a major candidate?

Dettner: I don't think so. I don't think so. But I think you have to consider the Socialist party is important enough to feature if you're having a series of candidates.

Morris: Well, a couple of years later, there was Upton Sinclair who had surfaced as a figure in California politics and ran for governor.

Dettner: Not until later [1934]. I kicked him out of a meeting one day.

Morris: Oh, did you?

Dettner: Well, he wanted to talk to the league and we said he could if he would not turn it into a political rally because that we could not support [candidates for elected office]. So it was a small meeting. It was in one of the smaller rooms of the St. Francis [Hotel] and he started handing out leaflets and I said, "This won't do, Mr. Sinclair. We are in a non-partisan situation." And he went right on. So, I said, "I hereby adjourn this meeting." So that was all there was to it. Well, you had to do something. You couldn't let him get away with that.

Morris: Tell me about meeting Mr. Roosevelt. You know, there was a film quite recently on television about the fact that nobody admitted or made any note of the fact that he was in a wheelchair most of the time and he couldn't walk without support.

Dettner: No, nobody did. The meeting, as I said, was in the ballroom of the Palace Hotel and Roosevelt was staying in the Palace. I was asked to come up to their suite ahead of time. I didn't talk to FDR--and Mrs. Roosevelt was not there, for that matter--but I talked to Anna Boettiger and a couple of other people. And then we repaired to the ballroom and FDR came with his walking sticks and on the arm of one of his sons. Elliot or Jimmy, I forget which.

And Anna Boettiger said a few words ahead of time and I was able to introduce her as a fellow member of the league. And she was very active in the league. She spoke briefly and I introduced FDR. He didn't make a long speech but it was very firm and the audience just was wild. The place was packed.

Morris: Because San Francisco was a Democratic town at that point or was there something particular about his appearance?

Dettner: San Francisco, I think, was unquestionably a Democratic town although not overpoweringly so. In fact, the centers of control and so forth were not in Democratic hands. All these men who were the husbands of our members, were captains of industry and heads of their professions. They were overwhelmingly in the world of Republicans.

Morris: I have heard that, which I've always thought was really interesting, that the two parties could coexist so, in San Francisco.

Dettner: Right, right. It's always been the case.

Morris: I remember Caroline Charles saying that there were maybe half a dozen men in San Francisco at any point who decided what was going to happen.

Dettner: That's largely true. Well, as I told you, about the John Strachey episode, a few men shut every possible hall to us to prevent our having him speak. It was a local impresario who took him when we had to give up our option on him. I mean, we simply had to say, "No, the league will not be able to do this." But somebody was just dying to have him, of course, and the place was jammed.

Morris: And the power group couldn't stop the impresario from--

Dettner: No, no.

Morris: Well, that's good. They used to be a group called the Blyth-Zellerbach Committee that would help out on some civic issues. Was that operative in your--?

Dettner: Yes, vaguely I know. I really can't tell you anything about it. I know there was such a thing and I can't remember what it did.

Morris: That may have been a little later.

Dettner: Yes, probably. I guess I was completely out of public things when I was back in Berkeley.

Becoming President of the League

Morris: Why do you think the board decided that they would like you to be president?

Dettner: I can't imagine. I think they were crazy. I really can't imagine. I know that they invited me to join the board because they liked my giving hell to this Britisher who thought the housing program was for the birds.

Morris: And what was the first job they gave you on the board? Do you recall?

Dettner: I forget. I really don't know. I suppose I could find out. As a matter of fact, I had intended to go down to the league office and take a look at the files before I talked with you. But I couldn't because I came home from the East just before New Year and I had this filthy cold of which I still have the traces. You can hear. And I just couldn't bring myself to do it. But I intended to and I will, for future conversations if you'd like.

As I said, we were much interested still in the dance hall situation. The other local issue that was absorbing a great deal of attention was the disposal of garbage. And the alternatives were filling and covering or dumping at sea.

Morris: It sounds like we haven't gone very far, does it?

Dettner: Absolutely. Well, that had been a burning issue for years and years. And as a matter of fact, we did a little skit for a light occasion for which we had a little song about whether we should be filling, covering, or dumping at sea. And there was a member of the board of supervisors whose name was Uhl. He was a person who threw monkey wrenches into plans. And I forget exactly how he figured in this garbage thing but he was very prominent in it. And I remember writing a little poem that we did as sort of a skit called "Who's Afraid of the Big Bad Uhl." It hinged largely on his attitude on the garbage disposal thing which was a burning issue.

Morris: I would think so, in a compact community like San Francisco. In later years, the Scavenger's Association was quite a powerful organization.

Dettner: Yes, indeed it was.

Morris: Did they have an opinion on this subject?

Dettner: I think so. I think so. I would have to go back and look at files to refresh my memory on most of that. But it was very definitely an issue that we gave a lot of attention to. And of course, on the broader front, the whole league was concerned with membership in the League of Nations. At the only national convention of the league I went to, which was right after I was elected president, that was the big issue for the national league. And of course, it favored membership and we did locally, too.

Morris: Would that have put you in touch with California's senior senator at that point?

Dettner: Who was Hiram Johnson. He was isolationist.

Morris: Yes. Were there any efforts to talk to him?

Dettner: I don't think so. Maybe at the national level but not at ours. Certainly not.

Morris: Well, nowadays league members spend a lot of time staying in touch with their local elected representatives. Was it the board of supervisors or the--

Dettner: Well, it would have been the mayor, then board of supervisors and perhaps commissions of various kinds, if they were involved in what our program interests were. Of course, we always had an observer at the board of supervisors meetings who would report to the board what had transpired. And therefore give the basis for communications to the board from our board, which were quite frequent.

Morris: Were there any women at that point on the board of supervisors?

Dettner: I don't think so. I can't think that there were. But again, I'd have to look at the files. I doubt it very much.

Morris: Aside from the obstructionist supervisor, were they receptive to communications from the league?

Dettner: Not particularly. I don't think they felt it had much clout.

Morris: What did you think?

Dettner: Well, I didn't think we had as much clout as we should have had, by any means. But you know, there was the tendency to say, "Well, it's nice you women are so interested in all these things." Their attitude was, more or less, "Leave it to us. We'll figure out what should be done."

Morris: How about get-out-the-vote activities?

Dettner: Getting out the vote? That was not a terribly pressing program at the time, as I recall. In other words, I don't think there was a widespread concern about the [numbers of votes cast in an election.]

Morris: Or the importance of women voting?

Dettner: Or the importance of women voting. I think actually, in California, women were so delighted to have the vote and, of course, they had it since 1911 which is why the Center started, the San Francisco Center, because women had the vote. And women who had leadership roles in starting it felt that they should be better informed and have a means of learning more about what was being proposed and what was being enacted.

Morris: But more at their community leader level rather than reaching out to broader issues?

Dettner: Yes, yes. Definitely.

Involvement with Other Civic Organizations

Morris: Did the League of Women Voters ever join forces with the Junior League, with the YWCA, or other women's organizations in pursuit of an issue?

Dettner: No, never. Well, the Junior League at that time--I don't know what it is now, but at that time it had no interest in political matters at all.

Morris: No, I don't think they do as such. But there seems to be some overlap now.

Dettner: Well, there very likely is. But I don't think there was then. I mean, I think everybody knew about the Junior League, of course, but considered it purely social and with no connection to anything we were thinking about.

Morris: Interesting.

Dettner: Yes. A lot of women who were interested in the league served on agency boards of one kind and another. There may have been some who served on the Junior League board, for all I know; it's quite possible. But the Junior League, I think, didn't have as much sense of mission at that time, as they had later.

Morris: Yes, they now take on some rather spectacular public programs.

Dettner: Yes, unquestionably. But at that time they certainly didn't. At least not locally.

Morris: Did these older women with the powerful husbands provide you with any guidance or training or assistance in asking you to be president?

Dettner: Oh, no. Oh, no. They just felt that their position in life was such that they would naturally discharge any obligations they took on with perfect ease. And you were supposed to do the same.

Morris: It just came naturally.

Dettner: That's right.

Morris: As a woman still in her twenties, how did you deal with these--?

Dettner: These old ladies?

Morris: Right, these old ladies. [laughter]

Dettner: Well, I suppose--I don't know really. They seemed very docile, actually. And we didn't really have any very controversial measures coming up at that time. The most controversial thing that ever happened in my presidency was the matter of the Strachey lecture.

Morris: That must have been kind of exhilarating.

Dettner: Oh, it was. It was because the women were delighted in their feelings. I mean, they felt very annoyed that their husbands had gone around blocking our access to any hall. On the other hand,

they felt, well, if John or Willy or whatever his name was felt this man was very subversive, maybe it was just his role to shut him up. He was no more subversive than a pussycat.

Morris: Well, the vision of him arriving in white tie and tails is very glamorous.

Dettner: Exactly and the perfect manners and charming personality and so forth. He was everything that any of them, the fussiest, could have demanded. And not one word, as I recall, about the coal miners.

Morris: Do you think he was tailoring himself for an American audience?

Dettner: Very much so. Very much so, which I think was too bad.

Morris: Yes. Did you think the league should be more visible in the community?

Dettner: Oh, definitely. I was all for making us prominent in issues that mattered. I thought it was very important, of course.

League Leadership Program##

Morris: Did you have some things in particular that you wanted to accomplish as president?

Dettner: As president of the league? No. I wanted the league to be outstanding and respected in the community. I wanted to have more members, more active members. But particular goals, no.

Morris: What kind of membership program was there?

Dettner: You mean to get members?

Morris: Right.

Dettner: Well, we used to have all these meetings, you know, small and large, on issues. People were invited and members could bring friends. There was no charge for these or anything. In that way we tried to spread the word.

Morris: With you as president, did more younger women come along?

Dettner: I don't think so. I think that probably came later, interested younger women. As younger women became more active in all kinds of things. And particularly, as there were more professional women and more women doing things outside the home the interest grew.

Morris: Membership increased as more women went to work and became--

Dettner: Oh, I think so.

Morris: Oh, that's interesting.

Dettner: I think so, without a doubt.

Morris: Because the concern now is that membership is down because so many women work, that they don't become active in volunteer organizations.

Dettner: That's probably partly true. I know that there have been efforts made in San Francisco, at least, to adapt to the needs of women who are working by having more sessions in the late afternoon or evening and not so many during daylight hours. And of course, the neighborhood meetings which go on and have been a feature of the league forever, I think, have tapered off some because women are absorbed professionally and in other things. But they still go on in daylight times.

Morris: The unit meetings.

Dettner: The unit meetings, yes. I haven't been to one for a long time but they do go on. I went back on the board, which I was told was totally unprecedented, sometime later because they were involved in some questions having to do with energy and energy alternatives and that sort of thing.¹

Morris: Nuclear energy?

Dettner: And nuclear energy among others. And so, since I was fairly informed on that subject, they had asked me to come to certain meetings and give some information which I was happy to do. And then they said they really would like to have a committee on energy but if they had one, the chairman had to be on the board. Was I willing to do that? I said, "Sure. I'd be delighted."

¹See Chapter X.

And I was. It was totally unprecedented that anybody who'd been president would come back on the board. Isn't that ridiculous?

Morris: Yes, but also it's an organizational adaptation. You want the past presidents around for advice but you don't want them telling the later presidents, "Well, when I was president, we did it my way."

Dettner: Oh, of course not. That would be frightful. But of course, I went back because of the existence of a brand new field of interest which didn't exist in the days when I was president. And it just happened that there wasn't anybody in the membership who had the access that I did to knowledge about energy sources and effects and so forth.

Morris: It would be really valuable.

Dettner: So I was delighted to do it, of course. I'm just very happy to help with it.

Morris: Was this during World War II when there was a shortage of--?

Dettner: No. It was certainly later than that. It was when we were talking about solar energy and wind energy and all these other things. I think it was the sixties, actually. But I really must go down to the office and take a look at things.

Morris: I think they'd be delighted to see you.

Dettner: Well, they better be. I'm very generous to them, as a matter of fact. I'm very much for them and I think what they do is fine and they're very important. I owe a great deal of the most exciting experiences that I've had in my life to the league because, I mean, the whole business with the NYA and everything came originally from my participation in the league.

Morris: Having introduced Mr. Roosevelt, did you stay active as a Democrat?

Dettner: Oh, I see. At that time, we kept our presidents on the ensuing board, I think, at least for one term. I forget how long.

Morris: As a past president.

Dettner: Yes, because I definitely was on the board after that but only for one term, I think. And then, as I say, I went back on the

board years later. But why not? If you have acquired some new kind of knowledge that they need, why not?

Morris: Issues circle around again.

Dettner: Certainly. Well, I didn't want to be recycled as president.
[laughter]

Morris: No. I think that would be asking a little bit much of you. Would you have still been--did you stay on as a member even though you went on and back to school yourself and then into your own issues?

Dettner: Oh, a member, always.

Morris: So I don't think we've asked anybody if the league had any special activities during World War II and then in connection with the United Nations getting established here in town.

Dettner: Yes. No, whether I've been an active participant or not, I've always belonged to the league and supported it in every way that I could. I was furious with it last year, though, because of the voucher issue on the ballot and the San Francisco league was supine. It did absolutely nothing about it.

Morris: Oh, dear.

Dettner: And I went to a meeting at the San Francisco Foundation at which somebody who was right in the thick of the education fight talked to a group of us. Those meetings at the San Francisco Foundation incidentally are very good and they're very enlightening. Anyway, the man who talked at this one, said the League of Women Voters is actually spearheading the opposition to the voucher measure and I would suggest that anybody who wishes to oppose the voucher measure actively give support to the league. I came home right away and wrote a check for the San Francisco league and said this is for the campaign against the voucher issue. But the opposition actually came from the state league. The San Francisco league was inactive, just one letter signed by the president that said at the very end, "We hope that you will vote against the voucher issue." If you call that having a campaign, I don't. I was furious.

Morris: I get the feeling that there are so many issues now and so many levels, what with a local and a regional and a state that they don't necessarily go into every one.

Dettner: Well, I think that must be true but I think that's outrageous. But this speaker, as I said, said to a mixed audience, men, women and everybody, "If you want to oppose the voucher measure actively, the best thing you can do is send support to the League of Women Voters." And the state league was doing this. But the San Francisco league might not have existed, even.

I was furious at myself because I could have sent a check to the state league just as well. But I hadn't. I thought, no, by all means [concentrate on the local organization].

On an issue that is as close to their interest as an education measure, I think it's just outrageous that the San Francisco league sat on its fannies and did nothing, because you can't tell me that was doing anything--at the end of a letter from the president saying, "We all hope," or something, "that you vote against vouchers."

Morris: The San Francisco Foundation is running community forums. Is that what I hear?

Dettner: Yes, donor forums, they're called. And I think they're simply marvelous. They're on issues that come before the populace for votes. For example, I went to an excellent one on Proposition 187, for instance. And their prestige is such that they can get very authoritative speakers for these things. They've been absolutely excellent. I've gone to as many as I could. I can't always make it but when I can I do. And I have found them extremely valuable.

Morris: Are these pros and cons or are these issues in which they've taken a position?

Dettner: No. They don't take a position, no.

Morris: I wouldn't think so.

Dettner: No, they just give you the opinion of a person who is in a position to have an educated opinion. And you listen and you make up your own mind what you're going to do. But no. I mean, even on the voucher measure, although of course they thought it was the most poisonous thing that ever happened, they couldn't take a position. And that's why the speaker said, "If you're interested in taking a position on this, the League of Women Voters is spearheading the opposition." And the state league was.

Morris: That's interesting. It's not the kind of thing that you would think a philanthropic foundation would be doing. You would think this would be something that the PTA and the league would sponsor.

Dettner: Oh, I know. But I think Doctor [Robert] Fisher is a man of such broad interest and knowledge about conditions. And of course, he feels that everything that happens in the community affects the philanthropic aspects of life and that the agencies that carry out philanthropic missions are influenced by everything political that occurs. And, of course, this is completely right. Therefore, he thinks that people who have been interested [in helping the foundation to respond to their constituents] as their giving of money indicates should have the opportunity to hear the best qualified speakers on all these questions.

Morris: So that their giving will be more informed--?

Dettner: Exactly. And their activity as citizens will be more intelligent. And I think there's no doubt it is.

VI CALIFORNIA DIRECTOR, NATIONAL YOUTH ADMINISTRATION, 1934-1939##

City and State Relief Commission Preliminaries

Morris: When you finished your term as league president, did you continue to be interested in Depression relief activities in San Francisco?

Dettner: Oh, heavens, yes. Then I became state director of the NYA, National Youth Administration, so I was right in the middle of it.

Morris: What brought that about? Had you been in touch with the people planning that program?

Dettner: As I say, it was one move after another. As I look back in my life, I think it is just incredible how one thing led to another. I mentioned that Mayor Rossi had said he would appoint a non-political committee to administer the bond funds if we passed them. We did pass them. I was on the committee.

In the course of time, Harry Hopkins, who was then a special representative to President Roosevelt, sent out his field advisor to look at all the committees, because every large community had a committee occupied with the relief of the hardships of unemployment, and from that to make up a slate of people for a state commission on the same subject. This guy was very nice and recommended me for the state commission and I was appointed by Governor Frank Merriam. And the state commission was a very good body. Monroe Deutsch, provost of the university, was a member. Ralph Jenny was the chairman; he was an attorney from southern California and a very able, delightful man.

The committee met and organized itself and asked me to serve as secretary of the commission, which I was delighted to do. In the course of time, they decided they should send somebody to Washington to find out what the New Deal programs were going to be and to try to determine what their impact on California was going to be. In my role as secretary, they thought I was the person who should go. So I went. And the field representative who had chosen me in the first place and a lot of other people from all over the state saw to it that I met everybody in Washington who was concerned with the whole New Deal program. I met Harry Hopkins and Aubrey Williams and other people, and later Ellen Woodward, who was heading a division of women's work in the WPA, Works Progress Administration, came out and asked me to be their regional representative. I said, "I don't think so," because I didn't want to live in Salt Lake [City], where the program was headquartered.

A couple of weeks after that, I had a call from Aubrey Williams, who said, "We want you to take the NYA in California. Will you do it?" And I said sure.

Morris: Because you could do that from San Francisco?

Dettner: I could do it and I was terribly interested in the opportunity to give young people a chance.

Morris: At that point you were married. What was the reaction of your spouse?

Dettner: I was getting a divorce. My spouse was an alcoholic. It was very unfortunate.

Morris: Yes. That's very difficult to extricate yourself from.

Dettner: Oh, I had to. Simply frightful. Well, it was terribly unfortunate.

Morris: This has been a long session. I hope I haven't worn you out.

Dettner: I probably talk much too much. And too discursively.

Morris: No, discursive is what oral history is about. It's the flavor of what happened and how people felt about what they were doing.

[Interview Date: February 7, 1995]##

[Note by Anne Dettner regarding her first father-in-law, Edward F. Treadwell:

Born Woodland, California in 1870. Attorney in general practice in San Francisco until at least 1950. Died in 1955.

A tall, well-built, handsome man, extremely reserved and not given to trivial conversation. His manner, to many people, may have seemed aloof, but in fact he maintained a self-protective distance as he was really very sensitive, and in his personal life he had few satisfactions and many serious trials. His entire family dumped their problems in his lap, knowing that he would see them through any and every difficulty. In several matters he could be volatile, as after a disastrous golf game, he was ready to reduce his golf clubs to kindling.

He enjoyed every aspect of his practice, which as you know, was outstandingly successful. He was, for many years, chief counsel for Miller and Lux and personal attorney for Henry Miller, whose biography he wrote (*The Cattle King*). Altogether he was a complex person who desperately needed intelligent companionship, a quality that he attained only in his last years, in his second marriage. To me he was always a figure of massively impressive weight who commanded my complete admiration and devotion.]*

*Bracketed material was added by Mrs. Dettner during the editing process.

Differing Relief Commission Ideas about Social Work

Morris: This morning we were going to continue talking about your work with the State Relief Commission.

Dettner: Well, yes, and I want to say a word about that because I thought that we fairly quickly glossed over it as a sort of interim step between the local activities and the national ones. But to me it was a very important time because it was the point at which the two attitudes about social work came head on against one another.

I so well remember that when I came back from Washington where I was sent to find out what the new programs were going to be like, I reported to the state commission and the staff people who attended the commission meetings the plans for a widespread employment program. The staff people were, to a man, appalled that there was going to be no social work aspect in the WPA [Works Progress Administration]--the NYA wasn't being talked about at that time--because to all of them it was incomprehensible. It was generally accepted that people who could not support themselves and their families must suffer from neuroses, health problems, or personality defects.

When I explained that, no, this was an employment program, it could be run by the employment service better than by the private social-work agencies, they were horrified. It was, of course, minimizing the importance of their own field for which they'd been trained. The existence of the state commission brought the differences in perception of the problem into focus.

We had a member of the state commission who came from the San Mateo committee. He was simply appalled at the behavior of the San Francisco committee which was a more or less self-appointed body which functioned by its own rules. He was determined to put an end to its existence.

I kept saying, "You can't do it." I mean, it's very bad public relations if you do. When the new programs come in, the committee won't have any place; they'll be finished. There will be nothing for them to do. So just let time take care of it." No, it couldn't be. We had to boot them out on their ear.

It was a dreadfully embarrassing situation to me because two of the women who were the most vocal members of the local committee were also very active in the league and in various other activities, and I knew them very well.

Morris: This is on the San Francisco committee?

Dettner: Yes, and I think they were relying on me to help them along. Well, I did, because I kept them for a long time from being fired, because the state commission could have put them out of business.

Three times at meetings of the commission, my colleague, Robert Hooker, formerly of the San Mateo County committee, popped up and said that the San Francisco committee is disgraceful, it is never going to be able to carry out any of the principles of the new programs and they should be gotten rid of; they're doing all kinds of illicit things. And they were. I mean, they had very little regard for anybody's rules except their own and they felt very confident of their own ability in this field.

The attitude then was best expressed by Miss [Katherine] Felton of the San Francisco Associated Charities, of which she had been the executive for some years. Her boast was that many of their clients were the third generation of families whom they'd originally assisted. And that was a boast instead of a disgrace.

Well, anyway, three or four times when Hooker proposed that the commission end the life of the San Francisco committee, I was able to put off a vote or to get a negative vote. But he was so intense about it and he was a very persuasive man, very smart. Then I was going to go to Washington for the commission, and I thought, oh, if they have a meeting and Bob gets on his feet, I'm sure they'll discharge the San Francisco committee. Because everybody else on the commission was really rather passive about it. What a local person had to say about it was what swayed them, actually. So three times I prevented it from coming to a vote, or got a negative vote on it.

So I thought, this is dangerous, and I asked the state director for a meeting in his office with Hooker and with him, and with the attorney for the State Relief Administration. What I wanted to find out was if there was any possible likelihood that there would have to be a meeting of the commission while I was away, because three times I had persuaded them this was a miserable idea and would only bring down obloquy on everybody.

"Don't do it," I wanted to say. "It's a problem that's going to take care of itself." Frank McLaughlin, who was the state director, said, "Absolutely, there isn't a thing that would require a meeting of the commission." I said, "Because if

there's the slightest chance, I'm not going to Washington. I simply cannot let Bob Hooker get away with this thing." They assured me, absolutely, that there isn't a reason in the world--

Well, the second Sunday I was in Washington, the bellboy knocked on my door and handed me a telegram from Bob Hooker which said, "Commission met in an emergency session yesterday. I kicked out the committee. I'm feeling like a new man and McLaughlin is suffering horribly."

Morris: Oh, dear.

Dettner: And the phone calls to Washington simply burned up the wires. People in San Francisco were outraged and shrieking at Harry Hopkins and anybody they could get to listen. So I came back to find I was the criminal who had staged all this and then run out of town in order not to be identified with it.

Morris: Was Mr. Hooker gloating?

Dettner: Oh, he was absolutely delighted to have achieved this, what he thought was a great thing for the whole program. They would have been out in a month anyway, you know, in the normal course of events.

Morris: Was Mr. Hooker a social worker himself?

Dettner: No, he certainly was not, but he was truly an idealist. He was the son of an extremely successful businessman. He, himself, later went into the State Department and had a really very great career. He was on George Kennan's political policy committee and he later became a top secretary in our embassy in London. He died a number of years ago. He was a very gifted man, no question. But in this, he just simply did not understand.

Morris: He needed a larger arena in which to operate?

Dettner: Much, much. And he was furious at these women.

Morris: They were at the same level. He was representing San Mateo County and they were the--

Dettner: But he was on the state commission which was concerned with every committee. Yes, I was the representative on the commission from San Francisco and he from San Mateo County.

Morris: Each county had a representative on the state commission.

Dettner: Pretty much. The whole East Bay was represented by Monroe Deutsch.

Morris: Ah, yes, from the university.

Dettner: Yes.

Morris: That must have been kind of an unwieldy group.

Dettner: Well, in a way it was but it was pretty good, really. And when you talk reason to it--well, as I say, three times I managed to get them not to vote for Bob's measure. But the third time I wasn't there and nobody spoke against him because they all felt that this is a San Francisco issue and if he says so, I guess maybe we should do it. But the San Francisco committee really was a blue-ribbon committee in the sense that every person on it was a very prominent San Franciscan.

Morris: Were both the local committee and the state commission appointed by the governor?

Dettner: No, the local committee was appointed by the mayor. Then, the commission, of course, was appointed by the governor. And the commission was made up of members of these local committees who had been pretty much selected by Harry Hopkins' field representative, Robert Hinkley, who was from Utah.

Morris: Well, before we get to that, I think we need to sort of set the stage. How did Governor Merriam take to this whole State Relief Administration?

Dettner: Oh, well, he thought it was nice that he had such a good commission. And after all, as I say, Mr. Hinkley told him who to appoint and he did. And he didn't demur about anything or make any fuss. So that was all very easy. No, that was all fine.

Morris: And where had McLaughlin, the director of the State Emergency Relief Administration, come from?

Dettner: I can't tell you exactly. He was not a social worker, not by any means. I really can't give you much about his background.

Morris: He wasn't anybody that you knew from your--?

Dettner: No, never heard of him before. And I don't think he was a local person. And he didn't come from Harry Hopkins' end of things because he was active before there was any State Relief

Commission and before there was any federal involvement in what we were doing. So, I'm sorry, I just can't give you any background. But he stayed on as state administrator of the WPA program and everything that went with it.

Morris: And the WPA was the federal program. And how did that relate administratively with the State Relief Administration?

Dettner: Oh, well, it didn't because once the work programs were in place, there was no more commission. And whether the local counties had committees or not was up to them, because the federal government was not interested in their having them or didn't feel they needed them. I mean, it was a straight-out program that had its rules and its methods and professional people to run it. So the commission, I think, went out of business pretty much as the WPA program came in.

I, of course, got off the commission long before that happened because of having been asked to take the directorship of NYA. I couldn't do that and be on the commission.

Eleanor Roosevelt Champions the NYA

Morris: Well, now, the NYA was also a federal program.

Dettner: Oh, definitely. The NYA was a program that was conceived and pushed by Mrs. Roosevelt. She, of course, was fully in favor of the WPA program. She thought young people have got to have a place in this whole effort of the federal government to get through the Depression. There ought to be a special organization for young people, to understand their needs and work in their behalf. And she remained very much interested in the program through its whole existence.

She used to come out to California. I think she went to a number of states but California she was especially interested in because it was so huge. She came out at least once a year and it was my job, of course, to take her around to show her the projects in action and she was just delighted to see them.

Morris: That must have been quite an experience.

Dettner: Oh, indeed it was.

Morris: When did you first hear about the program and first encounter Mrs. Roosevelt?

Dettner: Well, people were, of course, talking about the program when I went to Washington to find out what was being planned. And of course, I met all the people who were going to be active in the new programs. Harry Hopkins, himself, and Aubrey Williams, who later became the head of the NYA, and Ellen Woodward, who was in charge of the women's employment within the WPA. And oh, dozens of people, of course, who were going to be active in the new programs.

After I came back and reported to the commission all the things I had learned about the new programs I had a call one day from Ellen Woodward to ask me if I would head the regional office for the women's end of the WPA. As I told you, I said, no, I didn't think I would. Well, I didn't want to move to Salt Lake for one thing, which was where the regional headquarters were of all the New Deal programs. And I wasn't particularly interested in the special effort to get women into riveting jobs and so on. I mean, it didn't excite me much. But later, when Aubrey Williams called and said, "I'd like you to be the state director of the NYA," that was a different matter that I thought was very stimulating, very worthwhile.

Morris: Why a program for young people separate from a program for women?

Dettner: Well, a women's program, I felt, would be kind of--they would be shoved into jobs that they were considered capable of doing and they wouldn't be very interesting jobs.

Morris: There was no thought to open up new job opportunities for women?

Dettner: No, not really. Not really, unless there were women who were already involved in some professional field. For example, the WPA had a writer's project and an art project and women who had become conspicuous in those fields had every opportunity [to take part in those WPA programs]. That was one of the great things about the WPA, that it did everything possible to keep people in their proper field of activity rather than just shoving them all into a mass and putting them wherever their two hands could be used.

But the women's end of the WPA, as I say, didn't really excite me and I definitely didn't want to have to move to Salt Lake. So I said no. But then when I got the other call to do

the NYA, that was different matter. And of course, I had my headquarters in San Francisco.

Administering Education and Work Programs

Morris: Now, how did it happen that the youth program was headquartered in San Francisco?

Dettner: Because I lived here and nobody asked me to move.

Morris: I see.

Dettner: I mean, there was no reason why it shouldn't be in Sacramento or Los Angeles or--

Morris: And you didn't have to oversee what was going on with the programs in Utah or Montana?

Dettner: Oh, no. It was a state job completely. Aubrey Williams had a couple of field representatives who came around. They were stationed in Washington, and they covered a large territory in each case. They would drop in now and then and be helpful if help were needed with respect to administrative problems or any other matters.

Morris: Did they have a role in planning or operating the programs at all?

Dettner: No, their role was largely public relations and an advisory role for the state directors. They had no authority to perform administrative functions.

Morris: That's reasonable. I'm curious. I think of Harry Hopkins as being involved in national, well, State Department-type policy.

Dettner: Well, we're coming to this, because he started in as head of the federal government's efforts to combat the Depression, especially with respect to its effect on individuals.

Morris: Oh, as sort of a special assignment.

Dettner: Yes, well, very definitely. I mean, he was a well-known social worker. He came to Roosevelt's notice as being very able and

full of ideas in this area. So he was put in charge of the development of the whole WPA program, including the NYA.

As we come to it, I think you will see that what happened to me, and various other people at the same time, was the result of Hopkins being taken more and more out of the welfare field and into the political field with the president. And he no longer could give the welfare programs his close attention, and therefore the little satraps like Aubrey Williams felt very much more powerful.

This, I think, explains a great deal of what happened to me and to a number of other people. I was not the only person to be beheaded. Harry Hopkins could not have known what was going on. And his successor as more or less nominal head of all this relief effort was Paul McNutt, who had been governor of a state.¹

Morris: Political figure rather than a--

Dettner: Yes, yes entirely, and he was put in charge. And interestingly enough, when Aubrey Williams had reached the point where he decided to decapitate me, we sat in a hotel room in Colorado--I was summoned to go over to Denver where there was a meeting. And that was where it was done. And as we sat, the telephone kept ringing and I kept saying, "Why don't you answer the phone? I'm not going to run away."

"Oh, no, no. It can wait." It turned out later it was Paul McNutt who had just been told that I was being decapitated. He was calling to tell Aubrey, "You have no authority to do that. You can't do it."

Morris: Oh, my dear.

Dettner: But it was a *fait accompli* by the time the day was over. And Mr. McNutt would only have made matters worse, I think, by intervening at that point. But that was the situation anyway. Paul McNutt was not a specialist in these fields; he was an administrator. As I say, he'd either been in the senate or he was a governor. I'm not sure which. But he did know right from wrong. And he thought it was not at all a good idea to go

¹McNutt was governor of Indiana, 1933-1937, and high commissioner of the Philippines, 1937-1939, before becoming chairman of the War Manpower Commission and head of the Federal Security Administration in July 1939.

plowing roughshod over people who were doing a decent job and throwing them out.

I think the fact that Harry Hopkins was no longer watching over everything that went on made people like Aubrey Williams feel a great deal more power in themselves and that they could do jolly well what they wanted.

Morris: And Mrs. Roosevelt was no longer that closely allied with the program?

Dettner: She was indeed still allied to it, but I think she would have been very loathe to take a position with respect to the handling of administrative situations.

Morris: I see. She removed herself.

Dettner: Oh, I think she wouldn't have anything to do with it. She'd say, Mr. Williams is the head of this and what he does must be right. He must have decided.

Morris: But going back to the beginning, in '35, did she have, do you remember talking with her about her ideas or about what kinds of things she hoped would be done?

Dettner: No. I didn't have any contact with her until I was into the job and she was starting to come out to see what was going on.

Setting Up Education and Work Programs

Morris: How did you go about setting up the program in California?

Dettner: Well, I had some very good people. I had a secretary. I was elected secretary of the commission and I really took it very seriously. I was in the office almost all the time. The office was here, also, and the commission's office because McLaughlin, the director, was here. And there was no reason why the headquarters of the commission couldn't be San Francisco.

As I say, they elected me secretary of the commission and as such, I had an office and I was told that I could have an assistant. So, I had one who was a young woman who had graduated from Stanford in education, I think. Yes, it was. And she was extremely good. When she was working with us on the commission,

I thought she was just excellent. So, I asked her if she would like to come into the administrative setup of the NYA. And she did head the school part of the program and she was very good at it.

So gradually we built up some staff and had ultimately, I think, a very good staff. We had somebody in every large area. I mean, one person was responsible for Los Angeles and another for a whole group of northern counties. [The staffing] was done largely on the basis of what population needed to be served and how big the area was and so forth.

Morris: That related to what the caseload was according to the State Relief Administration statistics?

Dettner: That's right. And then, of course, we had a state committee to help in questions of policy.

Morris: Did you get to recommend those people?

Dettner: Yes, I chose them. I had a group of people from education and other fields and some others from business. It was a very good committee, actually.

Morris: People that you already knew by-and-large from your other activities?

Dettner: Some of them. Some of them I knew by reputation. And, of course, I got advice from a lot of people. But yes, I spent days talking to people about becoming members of the committee and it was a very good committee.

Morris: Nowadays, sometimes it's hard to find people to be on those kind of advisory committees.

Dettner: Yes. But it wasn't. I think everybody was eager to help. The need was so obvious.

Morris: Because there were so many unemployed?

Dettner: Yes, I mean, it was a frightful situation. Really terrible. And to be able to do something for young people--You see, the program did two things. Beneficiaries could stay in school and work on projects developed by the school or the university, whatever, and be paid by the federal government for the work they did. Or they could work on industrial-type projects sponsored by either elements of government or nonprofit agencies. And there they

were supposed to have the opportunity to learn industrial skills so that they would have some aptitudes when jobs opened up.

The money that we had was about fifty-fifty. We had an annual budget of \$6 million for California. And it was, I would say, roughly divided half and half between the school program and the work program. But it was a godsend for young people. I can't tell you the number of people I've met in later life who have told me things like, "Oh, if it hadn't been for the NYA, I couldn't have gone to school." Or somebody says, "I couldn't have had a cello," who later became a professional musician. So it was really, I think, a very, very worthwhile and satisfying undertaking.

Morris: Do you remember any of the statistics, how many young people went through the program?

Dettner: Oh, golly. Offhand I couldn't begin to tell you. And I don't think I have an awful lot of data that I could look up about it but I could find out.

Morris: And these were teenagers, mostly?

Dettner: Oh, the ages were sixteen to twenty-two.

Morris: How did the college component work out?

Dettner: Well, it was part of the education program. Projects could be sponsored by any public school or any university or any middle level school.

Morris: Junior colleges?

Dettner: Yes, exactly.

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Morris: Did you have to go, say, to Monroe Deutsch and say, "Do you want to set up a program at Cal?"

Dettner: I personally didn't but this person on my staff who was the education person did. But whenever there were problems--at one point we felt the University of California wasn't doing all it might and I went over and had a long talk with Monroe Deutsch.

He and I had both been on the commission preceding all this and I knew him quite well in any case because he and his wife, of

course, were very well known in San Francisco and had lots of friends and so on. Yes, of course, if it were an important enough problem, I would go personally. Otherwise, Ruth McFarland, who was doing the education program for us, would handle it.

Morris: If what NYA was doing was providing funds to an individual student to go to Cal, say, or San Francisco State, what did the college have to do?

Dettner: It had to build a project, a work project, useful to the institution on which these people could be employed.

Morris: So that they would be going to class and then also--?

Dettner: And also doing some work.

Morris: Do you recall what kinds of things they did at all?

Dettner: Oh, it's a tremendous variety of stuff but I guess mostly clerical projects of one kind or another. I can't be very detailed.

Morris: Kind of similar to the CETA program during the sixties, the federal Comprehensive Employment Training Administration?

Dettner: I guess so, although I don't know too much about that.

Morris: Right, you were doing other things by then.

Dettner: Yes.

Morris: Was it difficult for Ruth to convince people at the colleges to take on these needy students?

Dettner: Oh, they were delighted.

Morris: Really.

Dettner: They were delighted because they got little jobs done that they couldn't afford to do for themselves. And they felt that it was very important to keep these young people going to school. They were most enthusiastic and after I got fired, the letters that went to Washington from the school people were just tremendously laudatory. I don't mean only of me but of the whole program. They did. They really thought it was splendid.

Morris: I have a question about one program in particular, as an example, and then maybe we can take a look at some of the letters. What is now Lassen Junior College was, I believe, started as a NYA program. There wasn't a school there before the thirties.

Dettner: That could well be.

Morris: And the town put together, or the local board of supervisors or something, put together an NYA program in order to start a local college in Susanville.

Dettner: That's very likely. I remember there was such a program because I went to Susanville occasionally. I spent a great deal of time going around the state, looking at what was going on both on the work side and the school side. I knew the whole Susanville area very well because we had work projects and also school projects there.

Morris: I'm told they built one of the first ski tows in California up there as one of their work projects.

Dettner: I think that's right.

Morris: Did you have a regular program? You know, once a month you would go out on tour or just whenever needed?

Dettner: I was constantly running around. I mean, I didn't spend much time sitting in the office in San Francisco. I should say maybe a tenth of the time. The rest of the time I was out in the field. I didn't do it on a regular basis but I just managed to circulate a lot to keep an eye on what was happening. And of course, when Mrs. Roosevelt came, we went all over the state. And also Mrs. Mary McLeod Bethune because she was so interested in the black children. Of course, the projects were all segregated at that time.

Morris: Oh, dear.

Escorting Mary McLeod Bethune

Dettner: I think I sent you some pictures, didn't I?

Morris: Including a perfectly wonderful picture of Mrs. Bethune in a nursery school in Los Angeles.

Dettner: That's right. I thought I sent you that. She, of course, was a remarkable person. She was the first black woman to have had a significant job in the federal government. And she was given the job by the president and she was designated as director of Negro Affairs of NYA. And she was a wonderful person. I enjoyed her enormously.

Morris: While she was traveling in California, and presumably other places, was that when she was organizing local chapters of the National Council of Negro Women?

Dettner: I don't think so. I think her attention was entirely directed to the NYA programs.

Morris: She already had extensive organizing experience?

Dettner: Oh, I think so. She had started a school in Daytona Beach for young black women to learn business skills so that they wouldn't spend their lives scrubbing floors and washing dishes and so on. And that school, which I think was very successful, brought her to the attention of the president. And she seemed a natural person to be in charge of this particular program, which, of course, as I say was so segregated.

We did have some problems. She came out, at least once a year, as often as Mrs. Roosevelt did, although they never did happen to come at the same time. There was never any problem about where Mrs. Bethune would stay. She wanted, of course, to go around the state and see what was going on.

Morris: Sure.

Dettner: There were always black families who were just overjoyed to have her. The problem was where could we have lunch. And I had a person on my staff phoning when I knew what our itinerary was going to be to find out where in various towns we would be able to go and have a meal. It wasn't easy. And Berkeley was the hardest of all. Isn't that incredible? There was one place only and that was the Black Sheep.

I think she looked twice at the sign of the Black Sheep when we went to it, but she was impressed with it and Fritzzi, who was the founder, as you know, of the Black Sheep, Fritzzi--

Morris: It's before my time.

Dettner: Well, Fritzi was a very active, ingenious, Hungarian woman and she started the Black Sheep originally on the first block of Euclid [Avenue] north of the campus, the very first block. And in a loft. Of course, in no time, it had a loyal and devoted clientele because, a, the food was excellent and, b, the atmosphere was right for many of us and we loved Fritzi and she loved us. This was when I was an undergraduate.

Then, of course, she prospered and moved over to Bancroft Way where she had a big and very respectable-looking restaurant. And that was the only place that said, certainly they would entertain a black woman.

Morris: Do you think that was because of her European background?

Dettner: I think so, and her general attitude. But I think Mrs. Bethune did a sort of double-take when she knew she was going to the Black Sheep for lunch.

Morris: Well, yes. Black sheep has sort of a negative connotation.

Dettner: Exactly. It has several connotations. Decidedly.

Morris: Oh, boy.

Dettner: But that was literally the only place in Berkeley, of all places. Other restaurants would say, oh, no, no. We wouldn't care for a colored person.

Morris: How about here in San Francisco?

Dettner: Oh, no trouble. Well, I mean, you couldn't go everywhere but you knew that there were plenty of places where you could. And the best place in California was San Diego.

Morris: Now, why do you suppose that was?

Dettner: I don't know except that I guess it had a pretty large black population and I think they were probably in positions that were not just at the bottom of the barrel, because we used to have events at the Grand Hotel in San Diego when she was there, a dinner party, you know, big dinners. And no problem ever. But that was not true anywhere else.

Morris: That's really interesting. I thought it was Los Angeles that had the larger black population in southern California.

Dettner: It probably did, but I think the black population in San Diego was a lot more sophisticated and more advanced than black people in Los Angeles or around here.

I myself had a black housekeeper. And I said to her, "Mrs. Bethune is coming to San Francisco. Do you know about Mrs. Bethune?" "I never heard of her." So I said, "Isn't that great because, she'll come and have dinner with us." And she didn't think it was so great.

Morris: Did she think Mrs. Bethune was above herself or something like that?

Dettner: I think so. But I took care of that very summarily.

Morris: You solved it. Well, tell me about Mrs. Bethune as a person. You know, she has a mythical quality.

Dettner: Oh, I know. She was a dear, wonderful person and she was so good. She didn't want to talk to white audiences, I mean, at set occasions. She wanted to talk to black audiences. And she would stand there and say, "You get that chip off your shoulder." That was the general approach. Of course, they all were charmed with her. They loved her.

Morris: You said she started a business herself. How did that lead her into this kind of national activity?

Dettner: She did. I mean, she grew up just on the edge of slavery. If she escaped it, she escaped it only by a very few years. But as she grew up, she became very concerned about the possibilities for young black women, especially. And she started a secretarial school at Daytona Beach where they could be trained to do office types of jobs and stop always having to scrub the floors. And it was a great success. And that is how she came to the attention of the authorities.

She was not a woman of great education herself. But she certainly could make a very appealing address to an audience. She talked mostly to black audiences and she felt that they had a great deal to reform in themselves before they could expect to take part in the whole community.

Morris: Other people I've talked to say that she came to the Bay Area to help found the National Council for Negro Women and that the focus of that was urging black women to upgrade their skills and take part in the community in order to better life for the race.

Dettner: Exactly, exactly. Well, I'm sure that's right. And of course that came after her connection with the NYA. I think the NYA was the first thing that brought her into any kind of national prominence. In fact, I know it was. I suppose that in some way her activities were communicated to Mrs. Roosevelt who probably pushed the appointment for her.

Morris: That was what I was wondering. Did she think of the interest in the black community as coming from Eleanor first rather than Franklin?

With Mrs. Roosevelt in California and New York

Dettner: Oh, undoubtedly that's right. Have you read the new book on the Roosevelts called *No Ordinary Time*?¹ It's a marvelous book and I think you'll see in that how much of the things that the president did were originally prompted by Mrs. Roosevelt. She was extraordinary, really, in her perception of what the needs in the country were and of how to go after them and so on. I think she was most exceptional.

Morris: Do you recall the first time that she came out?

Dettner: Sure.

Morris: Did that take a lot of advanced planning and things like that?

Dettner: No. She came out solely to see NYA projects. She didn't want anything else planned for her. And she would not hear of any social engagements. She just didn't like them. She would have nothing to do with them. So we made these strenuous trips because she wanted to see as much as she could in a short time.

Morris: Where did she stay? Did you have to arrange?

Dettner: No. Her arrangements were all made ahead of time, always. In San Francisco she stayed at the Fairmont. I can't remember that she ever stayed anywhere else in San Francisco. And she didn't want any kind of private entertainment and she didn't want any social engagements. And that was it.

¹Doris Kearns Goodwin, op. cit.

Morris: Why is that, do you think?

Dettner: I beg your pardon?

Morris: Why didn't she do--?

Dettner: She was interested in seeing the NYA, period. And of course, she despised small talk of all sorts. And she despised occasions that were purely social and for no good reason. She would have nothing to do with them, in fact.

Morris: That must have been a little awkward and stiff when you were touring the northern counties and small towns.

Dettner: No, not really. I think people were always curious to see her and everything but apparently they didn't expect her to lavish a lot of time on them because I never was conscious of any constraints or anything about it.

Morris: Were there security people, security guards?

Dettner: No, not a soul. She would travel with me in my car--or any of our staff or anything. Nobody else. I don't think she would have tolerated it.

Morris: No driver, no person to carry your suitcases?

Dettner: No. No, not anybody. I mean, any of us, of course, would be happy to do it.

Morris: Right, right. And did she come by train or plane?

Dettner: I forget. I really forget because this was a long, long time ago. This was in the thirties. She may have come by train. I don't know.

Morris: Maybe some of that is in the book; things have changed so.

Dettner: Yes, exactly.

Morris: I mean, the entourage that people travel with now is the--

Dettner: Oh, exactly. I forget, actually, although I myself was going everywhere by plane, not within the state of California, of course, but anywhere else by plane because Aubrey Williams would call me, say, on Tuesday and he'd say, "I want you here for a meeting on Thursday morning." Well, there was no way to get

there except by plane. And he couldn't see any reason why I shouldn't fly. Why would you want to spend the time on the train? But it took twenty-two hours to get to Washington in those days by plane.

Morris: No through flights at that point.

Dettner: No, you stopped everywhere in the United States that had an airport. And I always arrived in Washington as a total wreck. So the first session of whatever we went for I didn't ever enjoy.

Morris: I can believe that.

Dettner: But there was nothing else to do. It never would have occurred to him to call you five days ahead so you could take the train.

Morris: Or to give you an extra day.

Dettner: And besides, he would have thought it very wasteful to spend all that time on the train when you could be either working here or in Washington. Ridiculous.

Morris: Did you visit with Mrs. Roosevelt or just, she sat beside you when you drove?

Dettner: Oh, sure and we talked on the way. And of course, she was very pleasant always and very interested. And it was all [very informal]--you had the feeling that the last thing in the world she wanted was any protocol or any formality. Just, "Let's talk seriously about what's going on," because serious conversation was all that interested her.

Morris: This looks like a picture of you and Mrs. Roosevelt out in the field on one of your--

Dettner: Oh, it was, undoubtedly. There should be some pictures there of our days at Valkill when Mrs. Roosevelt had all the directors once a year to Hyde Park. This could have been there--it must have been somewhere out in the country.

Morris: The place that Eleanor Roosevelt herself had is about two miles away from the main house in the village.

Dettner: Right. And on these occasions--here is the one of the president in his car which he could operate by hand. And he used to come over each time, just to say hello to everybody. And do you

know--who was the director who practically sat on the president's lap? It was LBJ [Lyndon Baines Johnson].

Morris: Really?

Dettner: He was the director in Texas.

Morris: I take it you were not impressed with him at that time?

Dettner: Oh, I would say he was the very last of the group who would be expected to become president. There were other state directors who I thought might one day be president of the United States. I remember that when he was chosen by Kennedy as his vice presidential running mate in 1960, I was horrified; it was Bob Hooker who told me, well, you know, Kennedy could have never been elected without Texas. And I suppose that was all true.

Morris: Not California in those days?

Dettner: No, no.

Morris: It sounds as if you and Mr. Hooker were still friends after he outwitted you about the San Francisco relief committee.

Dettner: Oh, yes. We were very good friends. Basically, we shared many of the same hopes for the country.

Anyway, we just went to Mrs. Roosevelt's for the day. And there was always a lavish buffet lunch; yes, it was always in the summer so it was outdoors.

Morris: And the president would come over and greet everybody and say you were doing a fine job?

Dettner: Yes, and say hello and so on.

Morris: Did she take you on a tour of the furniture factory she set up on the property to train young people, or tell you about that?

Dettner: No, no. We arrived at, say, at eleven o'clock in the morning and then there were greetings and then we would have lunch and then the president would drive over and beam on us all and we would beam on him. Then we went home. We went up on the train from New York and--

Morris: And a bus would meet you and take you out?

Dettner: Something like that, yes. But I'm pretty sure we went on a train from New York. Wait a minute. Did we go up from Washington? Yes, we probably did.

Morris: So that would be an overnight trek.

Dettner: Well, then we didn't.

Morris: Albany?

Dettner: It's weird, but I don't remember.

Morris: Part of the charm of Hyde Park is that it's off there in the country. It's still out in the country.

Dettner: Exactly. Yes, I'm sure it is. Well, I don't know. I can sort of visualize being on a train and we're all talking on the way up and so forth. I don't know. Isn't that crazy?

Morris: Would there be a part of the train reserved for you?

Dettner: Oh, yes, definitely. We would fill it up. Yes, of course. Because we had a state director from every single state of which, then, there were forty-eight. And they were all there and Aubrey and a couple of people from the Washington office and then his field representatives and all of us. So it must have been about sixty people. Yes. But a train is what I seem to remember.

Residential Program Problems; Job Termination

Dettner: I remember going up to Passamaquoddy [Maine]--

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Dettner: --where work had been started on some project to connect Lake Champlain with the St. Lawrence River. The project was never completed and the army was pulled out, but all the equipment was left. It was a natural for the NYA to move in and give boys the opportunity to work with all this equipment and learn a great deal about industrial processes. One took a train to go up from New York, I think it was, and it was the most primitive train you could have possibly imagined.

I remember when I got on (I went up with the state director from another state, who was a woman) the conductor said to us, "Are you ladies going to want breakfast?" And we said, "Oh, yes." Well, it turned out that what we got was a pork sandwich and an apple and a cup of coffee. And he had to get out in the middle of the night and buy these things at a stop. The train itself provided nothing. So it was a very amusing experience.

We got to Passamaquoddy and were met by the director and his staff and they had a guest house in which we were to stay. And it was a dear little house, right in the middle of the project. And we had dinner with the director at his house. And then we went home to go to bed and there was no key for the front door. And I thought, well, so what.

But my traveling companion said, "You would stay in this house without a key?" And I said, "What do we need a key for?" She said, "This is a village with 400 sex-starved boys." And I refrained from saying, "We don't have a thing to worry about."

Morris: The date of this *Los Angeles Herald* story indicates that you were still in your twenties at this time.¹

Dettner: I was. I was twenty-seven, but my colleague, who was considerably older, was not taking any such chances.

I think we have to go back to the NYA story in California, which I always thought had something to do with my decapitation but I'm not sure that that's correct. Anyway, for months and months Aubrey Williams and his field representative were at us to have a residential project, similar to the one at Passamaquoddy, although there was no such facility here and nothing around which a program could have been built.

I mean, to do it here, almost anywhere, was rather artificial whereas Passamaquoddy was a natural because it had all the ingredients for industrial training. And it had all the physical facilities that were needed and it was ready-made.

But for months, as I say, Aubrey Williams talked about nothing except a residential project in California. And the people on my staff and the people in the various counties really were very conscientious and tried to find a place where there

¹"Mrs. Roosevelt Sees Los Angeles," March 17, 1938. See appendix.

seemed to be a reasonable expectation of setting up a residential situation and finding some work for these kids to do.

Morris: This is getting youth out of the cities and away from bad influences, that sort of thing?

Dettner: Well, not out of the city necessarily but housed together for God knows what reason. But work, and education, of course, would have to be available in the area. Well, as I say, efforts to find such a program were made all over the state. Finally, our people in Los Angeles found a good location and a good building which was available at a reasonable rental, and obviously there was as much industrial activity going on in Los Angeles as there was anywhere in those days. So you would have had whatever the advantages of a residential [program] were, together with access to work and educational opportunities.

So our Los Angeles people negotiated a lease. And it was cancelled in Washington. Nobody ever knew why. So we were goaded then. "Go ahead and do it. Find a better situation," and so forth. Well, a hotel at Hermosa Beach, which is a suburb of Los Angeles on the ocean, became available because of the Depression. It was not getting any customers and the owners were dying to lease it to anybody they could. And it was close enough to Los Angeles for people to be bused in to jobs, although there was nothing right in the immediate neighborhood. The building was enormous, and the only way it could be managed was to have youngsters of both sexes in the project.

Morris: Oh, dear.

Dettner: Well, it was all right. One floor was devoted to 100 girls. And the upper floors to 400 boys. And we had, as the supervisor for the girls, an extremely well-qualified woman from San Diego, a most respectable person. And it worked out but it was a stupid thing because it didn't have close access to work. The kids had to be bused to the jobs that they had and the whole thing was very cumbersome and artificial. But, okay, everyone did his or her best to make it go.

Washington thought that was a fine idea. I never thought it was a fine idea. Most of us didn't think it was a fine idea. We were forced into it. And there was also some complaint from the people in Hermosa Beach who felt that having a project of this kind there would lower their property values. Of course, it wasn't going to be there forever, in any case.

And Mrs. Roosevelt came and saw it and she spoke very well of it¹ and Monsignor [Thomas] O'Dwyer came and he didn't have any criticism to make of it. Altogether it was stupid, though, because it was just not well conceived. But we were literally forced into it. There are a whole bunch of articles here, too, which I think you will want to take a look at.²

So when I got fired, a lot of people thought it was because of Hermosa Beach but that really wasn't the case. I, too, thought when I was going to be fired that that was probably the reason. But it turned out it wasn't. And what the reason was I don't know yet except that it coincided with the removal of a whole lot of people from work that they were doing and some of them much more important jobs than mine. And it came about when Harry Hopkins' attention was taken completely away from these programs and he was becoming a valued advisor to the president on matters of worldwide concern. People like Aubrey Williams came into positions of more power than they'd ever had before and they could do as they liked.

I was told by the field representative that Aubrey was going to fire me. And I went over to a meeting in Denver for the purpose. He decided he'd do it there. So we were sequestered in a hotel room, he and I. And he said sorrowfully, "I just can't go along with this any more, Anne." And I said, "Why not?" And I expected him to say, "Well, Hermosa Beach is just an abortion and we won't have it."

Instead of which, he said, "Well, you made the most terrible speech at a meeting of"--some organization, I forget the name of it now--"in Sacramento." And I said, "Aubrey, I wasn't even there." And he said, "Well, it was reported to me that you made a terrible speech."

I said, "I was invited to go to that meeting and I was asked to make a speech but I didn't like the sound of any of it and so I declined the invitation. I didn't go near it." I said, "Mrs. Roosevelt was there, I know. But I did not go and I wasn't there and I certainly made no speech," to which he had no answer.

¹"First Lady Acclaimed in Lecture on 'Youth,'" *Los Angeles Evening Herald*, March 17, 1938.

²See appendix.

As I mentioned before, all the time we were talking, the telephone was ringing and finally I got irritated with it. I said, "Aubrey, for heaven's sake, answer the phone." And he said, "No, it can wait." I learned later the phone call was from Paul McNutt, who had been assigned to Harry Hopkins' position with respect to the relief programs.

Anyway, he took over this part of Harry Hopkins' responsibilities, and he was told at the last minute that Aubrey was about to fire me. And he was calling to tell him he can't do that.

Morris: Oh, dear.

Dettner: But Aubrey refused to answer the phone so I stayed fired. But I was not the only person who was included in this general housecleaning, I guess Aubrey would have called it, because people in much more important positions than mine also found themselves stranded outside. I think he was just having a tremendous fling at authority which he hadn't had before because Harry Hopkins kept a pretty close watch on everything that went on. And I think once that supervision was removed, he just felt he could do any old thing and did.

Morris: Had you and Aubrey Williams disagreed on things beforehand?

Dettner: Except that I repulsed his amorous advances. That was a strong disagreement.

Morris: The other people who were unceremoniously dumped from their jobs?

Dettner: They were men. [laughter]

Personal and Political Changes; World War II Nears

Morris: They were men. Later on, in California at least, there were continuing complaints that some of the programs were being run by Communists and that the State Relief Administration should be investigated for UnAmerican activities. Did you hear any of that while you were in office?

Dettner: In my case, that all came later. I don't think there was anything like that in my time in the NYA program. It was a very

prominent note during my experience in the War Manpower Commission.¹

Morris: There's a letter here from Vivian Osborne Marsh, [a Berkeley woman who later ran for the city council]--

Dettner: Yes.

Morris: --dated August 25, 1939. She's writing to you saying, "Here in Washington I've been given a tip that someone in California who desires my job has written Aubrey Williams attempting to make him believe that people in California are dissatisfied with my work on NYA."²

Dettner: Yes, I remember that.

Morris: Now, is that part of what happened to you or is this the same?

Dettner: Who knows, who knows. Vivian Marsh is a black woman. She had some kind of a job with us. I forget what. We were perfectly satisfied with her and she was fine, as far as I recall.

Morris: Would she have been part of the California division of Negro Affairs?

Dettner: There wasn't such a thing in those days.

Morris: She wouldn't have been part of Mary McLeod Bethune's part of NYA?

Dettner: No, Mrs. Bethune was the Director of Negro Affairs in the NYA, but she didn't have anything to do with any specific project. She just went around the country to see that what she called her young people were getting the breaks and getting the jobs.

Morris: That black kids were included in the program?

Dettner: That's right, exactly. Both school and industrial. And that was all she did.

Morris: Vivian's letter to you is on Delta Sigma Theta sorority stationery, which she was head of at the time.

¹See pp. 166-167.

²See appendix.

Dettner: Oh, yes. I vaguely remember that. I don't remember what she was doing for us but I do, of course, remember that she was in the program.

Then, of course, another thing happened in California at that time and many people attributed what happened to me to this and that was the election of Sheridan Downey as senator [in 1938]. He defeated [William Gibbs] McAdoo. And McAdoo, of course, had sponsored me all through, and it was alleged that Downey was hungry for patronage and wanted to get rid of all the people he could so that they could be replaced with his supporters. Now, how true that is I have no idea.

Morris: Well, Vivian Marsh's letter sort of supports that idea because she said these people who were speaking against her were saying that she was going through the state, running down the New Deal and campaigning for the Republicans. "This is unjust," says she.

Dettner: That's ridiculous. There was a lot of political stuff going on, of course, and the change in senators made a big difference for Californians generally. And I think it's true that Downey was hungry for patronage. But I can't believe that that had anything to do with what Aubrey was doing.

In my humble opinion, Aubrey was throwing his weight around because for once, he didn't have Harry Hopkins watching everything he did. I mean, he felt a degree of independence which he'd never felt before.

Morris: One of the letters that was in your file was expressing the concern that the good program would be wrecked through the unfamiliarity of the national person with a situation in California, that Williams should sound out the sentiment of California school people.

Dettner: Oh, yes, the school people were marvelous. They wrote all kinds of letters. Here's one from the assistant superintendent in Sacramento and he was glowing in his support of the NYA as it was conducted.¹

Morris: And this is July, 1939.

¹Leo B. Baisden, Assistant Superintendent of Schools, Sacramento, to Aubrey Williams, July 31, 1939. See appendix.

- Dettner: Well, that's when I got fired. And Aubrey said, "Now, your employment stops on the first of August, but don't go near your office any more. You shouldn't go near it. Just keep away." Which, of course, I paid no attention to.
- Morris: That sounds as if there wasn't the usual two weeks notice or anything like that.
- Dettner: Oh, no, nothing like that at all.
- Morris: What happened to the program after you left?
- Dettner: Well, the Mormon bishop of Utah stepped in for a while. I forget his name, even. You see, things were kind of drawing to a close anyway by then. The war was not a reality, but I think the possibility of war was in the minds of a great many people. So a great part of the program went over to the employment service. And a sort of skeletal organization remained. What it did, I really am not very sure because I was very busy earning my \$1,400 a year at Cal by then.
- Morris: You mentioned earlier that the NYA job paid \$4,500 a year.
- Dettner: Yes.
- Morris: That was quite a good salary.
- Dettner: Well, I was the state director after all. Yes, that was good.
- Morris: Did you have a feeling that people looked askance at you because it was a woman in a position of such visibility?
- Dettner: Never. And as I told you, I had a very good committee who were very supportive of me. I think if anybody had made any cracks about why does a woman [get that job]--they would have stepped right on it. They were excellent people, all of them. There were some school administrators. There were some industrialists. It was a mixed committee but a very good one.
- Morris: Who from business and industry, do you recall?
- Dettner: Oh, I think there were a couple of people from Los Angeles. I'm sorry, I'm just not very clear on--
- Morris: I'm just curious. [There are a couple of letters here from] Maurice Harrison--

Dettner: Maurice Harrison was a very important person. He was an attorney in San Francisco and he was something or other on the Democratic National Committee. He was a person whose word was listened to carefully whenever he spoke. He was a very warm supporter of mine.¹ And George Creel, of course.

Morris: Didn't Creel continue to be a controversial figure in California welfare administration?

Dettner: Not terribly.

Morris: In the reading I've done about him, he was part of the controversy about whether the State Relief Administration was wasting money and tainted with left-wing influences?

Dettner: Well, of course, he was bitterly opposed to the Roosevelts. He hadn't been originally. In fact, he was considered a Democrat. But he became very bitter. And he was vile about Mrs. Roosevelt, simply awful.

And he did get awfully conservative. Now, there are some letters between him and me in this file if I can find them for you. He was very supportive at first of all I was doing, and then he got very cold.

Morris: To you?

Dettner: To me.

Morris: Oh, that's too bad.

Dettner: Yes, it's too bad. There's a whole bunch of letters involving--I think you should look at that if I can find them.

Morris: This is a memo from 1940.²

Dettner: Yes. This is after I was out.

¹Harrison, a partner in the firm of Brobeck, Phleger & Harrison, wrote several letters of introduction on Mrs. Treadwell's behalf in May 1935. See appendix.

²Memo, October 18, 1940, "To All NYA Employees," reproducing a letter from Henry Rhine, National Office, UFWA [United Federal Workers of America], to Aubrey Williams. See appendix.

Morris: And this is about Maurice Mandell.

Dettner: Maurice Mandell was my director of works projects. And he was so good at it that Aubrey took him over to Washington to be national director of works projects. And that's all you need to know for background but I think you should glance through that because it's very revealing.¹

Morris: Okay, so Mandell was dismissed effective June 26, 1940.

Dettner: Right. He was fired. And you read it because that's really worth reading.

Morris: It says that in Washington, he was several times commended by Aubrey Williams.

Dettner: And they went to the FBI which investigated him and found nothing in his record to cause anybody any concern at all, but Aubrey fired him anyway.

Morris: [According to this memo,] Williams' letter of removal said that they needed somebody with a technical background and assigned Mandell to work with a Mr. Campbell.

Dettner: Yes.

Morris: Ah, here we go. "Mandell had previously been informed by you [Aubrey Williams] that you were requesting the FBI to investigate charges that he was a Communist."²

Dettner: That's it.

Morris: "Despite the fact that a committee appointed by you had in September, 1939, made an investigation of the same charges and had completely exonerated Mr. Mandell."³

Dettner: Yes.

Morris: This is a letter from the national office of the union that Maurice Mandell belonged to.

¹See appendix.

²Ibid, p. 2

³Ibid.

Dettner: The federal workers, yes.

Morris: The United Federal Workers of America. Oh, oh. So the union was requesting reinstatement.

Dettner: Exactly, since there was nothing against him.

Morris: And whatever happened to that?

Dettner: Well, Aubrey kicked him out of the NYA and wouldn't show his file to anybody. And that was that.

Morris: And this request for reinstatement, was anything done about it?

Dettner: No, nothing.

Morris: What finally happened to Aubrey Williams?

Dettner: He died, some years later.

Morris: Subsequently we went through [a] period in which a lot of people were accused of Communist [party membership on little or no evidence.] Do you think this was an early example of--?

Dettner: Oh, I do. I certainly do think so.

Morris: And do you think that was part of the concern about yourself? That somebody said you were--

Dettner: Oh, I doubt that. I don't see how anybody could have. No, I think in my case, I think Aubrey had terrible personal resentment about me and I think he just wanted to show his authority and he took all the means possible to do it.

Morris: And there was no grievance procedure at that point?

Dettner: Oh, nothing. No procedure of any kind. Just, "You're through. I can't go on with this," said he. And I said, "Would you tell me why?" And he said, "You made a terrible speech." I said, "Where?"

"At this organization." I said, "Aubrey, I wasn't there. Mrs. Roosevelt was there. I was not there because when they invited me, I didn't quite like the sound of what they were up to and so I declined their invitation completely."

Morris: What was this organization?

Dettner: Oh, I forget what they call themselves but, you know, it was something very progressive--something the world needed. But I remember thinking, no, I'm not going to go up and talk to them. They wanted all sorts of justification for my being invited to speak to them. And I thought, nuts. So I wrote and said I would not be able to take part. But as I say, Mrs. Roosevelt was there. But Aubrey said that was his ground for firing me--that I made such a terrible speech there. I mean, I ask you, can he be more stupid?

Morris: Oh, but how painful that must have been, though.

Dettner: Well, it was in a way.

Morris: Did George Creel come to your support?

Dettner: No, by this time, George didn't like anybody. He hated the Roosevelts. He didn't like anything about anybody.

Morris: Oh, dear. And was there anything specific in his turning cold to you and the NYA program?

Dettner: George Creel? No, nothing specific. I think he just thought, oh, what a pack of idiots and I'm finished with that.

Morris: I see. There was a letter addressed to him at the National Press Office building in Washington?

Dettner: Oh, yes. He was something on *Collier's* and had been for ages. He was involved in Hermosa and it was shortly after I was fired it was closed.¹ And that was all right. But then, my point about Hermosa was that we were absolutely forced into it. The question was, I mean, get a residential program going or say goodbye to the program. You know, it was just this--here's some Creel correspondence.

Morris: And program also was closed in 1939 when you left?

Dettner: Although everybody including Mrs. Roosevelt and Monsignor O'Dwyer who had come up to see it said they thought it was fine.

¹"Hermosa Youth Hotel to Close," *Los Angeles Herald and Express*, July 21, 1939, and "State Administrator Dissatisfied with Local Set-up, Youths remaining at camp will be returned home," *Redondo Beach South Bay Breeze*, July 20, 1939. See appendix.

Advisers and Staff; Other LWV Recollections

Morris: Oh, dear. This NYA file includes a letter from Irene T. Heineman, Assistant Superintendent of Public Instruction for the State of California.

Dettner: That's right. She was on my [advisory] committee.

Morris: Was she one of the League of Women Voters ladies?

Dettner: No. Did you know Leslie Ganyard?

Morris: I feel as if I did.

Dettner: Well, she was Leslie's aunt, and Leslie Ganyard was executive secretary of the league when I was president.

Morris: I didn't realize that the league had paid staff in those days.

Dettner: Yes. This is when it was still called the center but it was the league. It was the league at the time that I went on the board.

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Morris: Did Leslie help in the decisions as to how that transition was going to go?

Dettner: I don't think there was anything really much to discuss about it. The board was eager to have the center go along and have a wider scope than it had before. The league at the time when I first joined it, or the center, I guess I should say, was a very elitist organization. The women who started it were all the wives of men who were very influential in the community in their professions or in business. And it only became more democratic as time went on. It was beginning to be so, I think, in my time. But it eventually became completely so.

Morris: So it was from the League of Women Voters that Leslie went to become executive of the Rosenberg Foundation?

Dettner: Yes, I think that was a direct switch. She may have done something in the interval between--

Morris: Had she been a league member herself, a member of the center?

Dettner: I don't think so. In other words, was she picked from the membership to be the executive? No.

Morris: Nowadays quite often that happens.

Dettner: Oh, sure. No, I don't think so. I think that these women were anxious to have an efficient person and a person of good breeding and someone who could deal with them and with the community. And they picked her as the executive director and she was extremely good, of course. Oh, I thoroughly enjoyed working with her and we became very, very good friends, of course. And Miss Arnold, who was the office secretary, Evelyn Arnold, went over with me into the NYA. She became our receptionist and sort of general greeter.

Lessons Learned

Morris: [I have one more question to wrap up the NYA.] I wondered if there were any lessons that you learned or things from the experience that affected your handling of subsequent career moves.

Dettner: Well, there was no question that as an administrative experience, it was tremendously valuable in terms of knowing how to pick staff and so forth. It was enormously helpful to my whole development, of course. And it was a tremendously interesting experience. I mean, you felt that you were doing something very important at a time when what you were doing was very necessary.

I have thought over and over that we should have a program of that sort during this current period when youngsters are joining gangs and buying guns and all this sort of thing. There was nothing like that in those days. I mean, youngsters didn't feel they were totally abandoned or that nobody gave a thought to what they did with their lives. It seems to me that was an extremely valuable thing.

Morris: Was your sense that, from 1935 to '39, the NYA and the Civilian Conservation Corps between them pretty much took up most of the young people who needed jobs?

Dettner: I think so. I don't think there were very many stray people who had nothing to do and no place to go. I don't think so. I think they were extremely valuable programs. And I think we should

have them in any situation where the social condition is deteriorated.

Morris: Were there eligibility standards?

Dettner: No. Age, that's all.

Morris: [How were young people recruited?] Were there stories in the newspaper that these programs were available and young people were invited to come by or stop in?

Dettner: Oh, yes. There was plenty of newspaper publicity about the fact that the program was being instituted. And, of course, the schools took a large part of the responsibility for letting the school-age population know that these opportunities existed. Schools and universities also were extremely cooperative and really did as good a job as could be done at developing work that was legitimate. I mean, legitimate in the sense that it wasn't just made work with no significance, and supervising it. I think it was extremely good and very well handled and could be again, of course.

Morris: I happened to be looking at U.C. enrollment figures in the twenties and thirties a couple of days ago and you could see a drop in enrollment until about '36 and then it goes up again and then, of course, it took a major drop during the war years.

Dettner: Yes, of course.

Morris: I suppose it was useful to the colleges, too, that they could keep their enrollment fairly steady.

Dettner: But I think this is a better way of dealing with economic problems than forcing youngsters to pile up enormous debts. I mean, let them earn part of their way through school so they don't have this hanging over their heads. Now the youngest of my so-called grandchildren went to medical school and I hate to think of the loans he'll have accumulated by the time he's finished his training.

Serving on the 1948 Grand Jury

Morris: Here's one more picture of you. This was in 1948--

Dettner: In the grand jury.

Morris: --in the San Francisco Grand Jury. What kind of experience was that?

Dettner: A rather disillusioning one. Members of the grand jury are nominated by judges of the superior court, and there are no eligibility requirements other than age and residence. The result is a group of individuals with differences in education, outlook, and experience. Preliminary examination by the district attorney, in my case Pat [Edmund G., Sr.] Brown, merely serves to reveal any strong feelings or prejudices which would impair impartial judgement. On the whole, the group with which I served was pretty mediocre.

One member of the grand jury I sat on was the head of the Yellow Cab Company. His name was Pettitt, and he kept urging me to come to dinner before the meetings. And I would always say, "That's awfully kind, but I really do like to have dinner with my husband."

But he always thought of little things to make me feel better as the lone woman on the jury. There were dinners from time to time, they would be in a restaurant and we'd all attend. One time we had music supplied by Mr. Pettitt. And what did they play as we came in? "One Alone!"

Morris: Did they tease you in general about being their mascot or their one woman?

Dettner: No, no. They were just not inspired about anything.

Morris: What did the group get accomplished?

Dettner: Oh, nothing. Well, we decided whether suspects should be brought to trial. Then we studied the departments of the city and recommended what should be done with them, if anything. That was the job of the grand jury. Now they divide the functions of the grand jury into two parts. One is the criminal part and the other is the survey of departmental activity. But we did both and both very badly.

Morris: Well, thank you so much for a long day.

Dettner: I'm afraid I've worn you out.

VII CAREER IN BIOCHEMISTRY, 1940-1972

[Date of Interview: March 10, 1995]##¹

Scientific Education, Part Two

Dettner: Let's not be so rigid. [The interviewer had addressed her as "Mrs. Dettner."] My name is Anne.

Hughes: I'm interested particularly in your scientific career, since Gaby has done a very nice job covering your nonscientific career. I know you spent some time at Stanford Medical School, which of course in those years was in San Francisco. Can you tell me how that came about?

Dettner: I can indeed. I left Berkeley in 1926, the year that I should have taken my B.A. and couldn't get it because I had this mixed-up major. I had entered the university as a pre-med student, and after my first taste of biochemistry, I decided that was my field and I wanted to make it my major. In those days it was not possible. There was only one course, which is the course given to the first-year medical students, and only one volume of text. There was no way to have a biochemistry major. My faculty advisors cooked up a mixed-up program for me with lots of chemistry, chiefly organic chemistry, and a lot of biological subjects. By the time it came time for my taking my B.A., I didn't have the right assortment and alignment of units. So in some disgust I departed and thought, "I'll come back and get that degree some other time."

Hughes: Why were you attracted to biochemistry?

Dettner: Because it seemed to me to be the subject that was basic in medicine. I realized when I got into the subject, even as

¹This interview session was conducted by Sally Hughes, ROHO specialist in science and medicine. A few of Mrs. Dettner's comments from Tape 2, Side B are included.

superficially as that one course allowed me to do, that it was not the clinical aspect of medicine that I wanted to do. I wanted to understand the basics, and that was biochemistry. There was no other choice at that time.

Anyway, I tried to get a job. I went all over San Francisco, to the Hooper Foundation¹ and everywhere I thought a budding scientist of my sort might have a chance.

Clinical Pathology Technician, Stanford Medical School

Dettner: The only person who would talk to me at all was Dr. Harry Wyckoff, who was clinical pathologist at Stanford Medical School and who was himself a very devoted and distinguished hematologist. He said quite frankly, "We'd have to have six months to teach you before we can think about employment." I was more than happy to think I could do that. So I did for six months learn all the principles of clinical pathology and worked for a little while in the Stanford laboratory which served the private patients.

Dr. Wyckoff allowed me then to join him in the late afternoon and evening, and I would really work with him on the research aspects of his interest in hematology. I learned a tremendous lot, of course, doing that. At the end of the apprentice period, he sent me downstairs in the old Lane Hospital to run the clinical laboratory for the clinic's outpatients.

Hughes: Was it unusual at your tender age to be given that responsibility?

Dettner: I succeeded a man who was really irresponsible and not a very good teacher. Not only did the lab serve the clinic patients, both ambulatory and hospitalized, but it served as a training ground for future technicians. He really wasn't very good at either job and had a slap-dash approach. He was a person of inadequate education himself, and without any real interest in science.

To my great surprise, I was asked to take over the operation of the clinical lab. It was also a training spot for laboratory technicians. I held that position for several years. Then I pretty much dropped out of the work scene altogether, because I married, very mistakenly and unfortunately. It was then that I became

¹Originally a separate institution administered directly by the University of California Regents, in 1958 the George Williams Hooper Foundation for Medical Research was made an organized institute within the university school of medicine, later designated UC San Francisco.

interested in all the civic activities in which I was subsequently involved.

Hughes: What year did you marry Earl Treadwell?

Dettner: 1930.

Hughes: So you were pretty young still.

Dettner: I was still young. I was quite young when I became president of the League of Women Voters. I'm trying to tell my history chronologically.

Crocker Radiation Laboratory Technician, University of California, Berkeley; Early Neutron Therapy

Dettner: It was after my having directed the NYA program in California that I really wanted very much to get back into what I thought of as my own field. Dr. Wyckoff, who had been my mentor at Stanford, and with whom I'd done all this work, wrote to John Lawrence and said he thought that John might find me useful in some capacity.

Hughes: Why did he pick out John Lawrence, do you suppose?

Dettner: He felt that new and exciting things were going on at the Radiation Lab¹ [at the University of California, Berkeley], and he knew I would be interested from that point of view. I think he thought I was a good, solid, hard-working drudge when I needed to be and that Doctor Lawrence might find me useful. I was delighted to go over to the Berkeley lab.

Hughes: Do you remember what year that was?

Dettner: Forty. I remember perfectly. I had a completely unstructured job because the lab itself was an unstructured operation.

Hughes: Now you're talking about Crocker [Radiation Laboratory].

Dettner: I'm talking about Crocker. Crocker was the whole Radiation Lab at that time. The cyclotron was there in that building and patients were coming for neutron therapy. There was this big operation of treating terminal cancer patients with neutrons, not with any thought that they were going to be cured by the cyclotron, but because there was a vast interest in knowing what neutron treatment did to human tissues.

¹Now Lawrence Berkeley Laboratory.

Just incidentally, I have wondered, particularly since [Secretary of the U.S. Department of Energy] Mrs. [Hazel] O'Leary started an interest in the history of therapy with these materials, whether those patients did give informed consent or whether they were just told, We have a new form of radiation therapy that we're going to try.

The people at San Francisco General Hospital who received the bodies of these patients for autopsy said that it was indescribable what had happened to their tissues from the neutrons. Of course, they later did determine that the doses were prohibitively high.

Morris: By today's standards?

Dettner: By any standards. But, of course, they were learning what they were dealing with in terms of biological effects of neutrons.

Hughes: I've never discovered any consent forms in looking through the [Ernest O.] Lawrence papers and the archives at UCSF.

Dettner: I think it was quite in keeping with the methods of the time not to require consent, with respect to what the cyclotron made possible. These patients were all from San Francisco General Hospital, in terminal condition from various forms of cancer. They would come to Berkeley by bus and would be returned to the hospital after their treatment.

Hughes: So they were charity patients.

Dettner: That's right. And they were all terminal cases. Nobody ever anticipated any therapeutic benefit, of course, but there was the opportunity to see what the biological effect of neutrons was.

Hughes: After World War II there was a tussle between the medical school and Donner Lab over control of patient research, the medical school maintaining that anything that involved patients must be okayed by them. Beginning in the mid- to late forties, there was dissension about the growing clinical work that was going on at Berkeley.

Dettner: I have no doubt of it, but I have no knowledge concerning it, as I was no longer in Berkeley.

Hughes: Robert [S.] Stone, I know, was involved with neutron therapy. Was he always there, on the site at Crocker, when the patients were treated?

Dettner: He came, not in the same bus, but right along and was there and supervised the treatment; absolutely.

Hughes: Say something about him as a personality.

Dettner: I, of course, knew him intimately. He was chairman of the department of radiology at the medical school. He was a very nice man and definitely an old-school radiologist, not modern in the sense that my husband [Bela (Bertram) V.A. Low-Beer] was. I think he probably was not much of a therapist. Medical school training in radiology before that time emphasized diagnostics, which is largely concerned with anatomy--structure--while therapy, of course, is intimately concerned with physiology.

Hughes: Was Stone interested in the idea that neutron therapy would have therapeutic use?

Dettner: Doctor Stone was, of course, interested in anything which might in any way alter or affect the practice of radiology, and I think the Radiation Laboratory wanted to be protected by having an actual radiologist involved in the experimental use of neutrons. They would have been very foolish not to. There was nobody in the Rad Lab who was a physician in that field. John Lawrence was an internist. He had no special knowledge about radiation therapy. I think the Rad Lab felt they didn't want to embark on a program involving the treatment of people without a certified radiologist in charge.

Hughes: Do you know anything about how they determined dosage?

Dettner: I think it was entirely hit and miss. Look, they were working blind. The cyclotron was a new facility that had never existed in the world before. What they were trying to do was find out what its effects were under varying conditions, to determine its potential value as a therapeutic agent.

Hughes: Now there had been some animal work, I know.

Dettner: Lots of it. But not in the sense that patients were being exposed to neutrons. Our animal work would consist largely of injecting plutonium into animals and seeing what happened and how fast they got rid of it and how soon it killed them and how it affected them. Autopsies would determine what tissues were affected and how. From the very beginning Crocker Lab had a big animal colony, so there were plenty of rats and mice always on hand for research. The subject was so new that there were unlimited avenues for investigation.

Hughes: Were you present during some of these sessions with the neutron therapy?

Dettner: No, I had nothing whatever do with the neutron therapy except to monitor the blood status of the patients by taking frequent blood counts while patients were under treatment.

My husband didn't have anything to do with it either. He was much more interested in the side that I was, which was the effect of artificial radioisotopes and the determination of appropriate dosage and the metabolic behavior of these materials.

Hughes: Describe what you did when you first arrived.

Dettner: I had a completely unstructured job, because they really hadn't worked out their goals or methods. I more or less did what came to hand.

Monitoring Patients

Dettner: One of the things that I did was to monitor the blood status of the patients who were getting neutron therapy. That was important to know. It was one of the indices of what the neutrons were doing to them.

Hughes: So the exposure to neutrons was reflected in the blood count?

Dettner: Oh, certainly.

Hughes: Do you remember what would happen exactly?

Dettner: Yes, their white count would be lowered markedly, and frequently the red-cell count too. They had blood pictures that were not good to start with but the effects of neutron irradiation were certainly present. I suppose that work could have been published but I don't think anybody was very keen to have it published, so it never was. It was not the most encouraging prospect for neutron therapy. In the light of subsequent work, it was realized that the neutron doses administered to these patients were inadmissibly high.

Radiophosphorus for Therapeutic Use

Dettner: As I say, my job was unstructured, and I could more or less do what I wanted, apart from a few things like, as I said, monitoring the blood status of the neutron patients. I was a shipping agent for radioactive phosphorous.

Radioactive phosphorous, P^{32} , because of the ubiquitous distribution of phosphorous, provided a means of delivering therapeutic doses to blood forming organs. For many years it was

the treatment of choice for chronic leukemias and it was somewhat useful in other blood dyscrasias.¹

There was therefore a widespread demand for P³² from clinicians all over the United States. Their requirements were supplied from the Berkeley lab, and I was responsible for filling the requests.

Hughes: Who was making the isotopes?

Dettner: The isotopes were being made in the cyclotron.

Hughes: I know. But who specifically? Anybody who happened to be using it?

Dettner: A group of young scientists including Cornelius A. Tobias, Ken Scott, and several other people. They were supervised, of course, by Ernest Lawrence. John Lawrence² didn't, as I can recall, have anything to do with the cyclotron personally.

Hughes: Was he working with the radioisotopes?

Dettner: Yes, he was running this whole P³² program. In addition to sending P³² all over the country, we had a sort of clinic going for people coming from all over the United States to get treatment for leukemias and polycythemias. That was part of what went on. Then there was a certain amount of animal work.

Hughes: Did patients start coming for P³² in the 1930s, before the war?

Dettner: Oh, yes, indeed. I'm trying to recall. I went over to Berkeley in 1940; I forget what month, but early in the year, I think. As I said, the main thing that was going on was the neutron therapy for the cancer patients, but also a certain amount of treatment of blood dyscrasias, mostly leukemia. There was an enormous mail-order business getting P³² spread all over the country. For years P³² was the treatment of choice for chronic leukemias.

Hughes: Were those samples sent out free of charge?

Dettner: I don't know. If there was a business aspect to it, I don't know anything about it.

Hughes: How physically were they sent?

¹The first use of radiophosphorus in treating leukemia at Berkeley was in 1937, according to *Centennial Record of the University of California*, Berkeley: 1968, 324.

²Scott and John Lawrence are the subject of oral histories available at The Bancroft Library.

Dettner: We packaged them and sent them.

Hughes: As what?

Dettner: Liquid, in little vials.

Hughes: P^{32} has a relatively short half-life; isn't it about fifteen hours?

Dettner: No, about two weeks. But they had to get it out promptly and they had to be used promptly on arrival. As a result of the popularity of P^{32} over the whole country, people who could frequently made the trip to Berkeley for treatment.

Hughes: How was it given?

Dettner: Intravenously.

Hughes: With just one dose?

Dettner: No, it was always a series of doses. Because, as you said, the half-life is so short, two weeks, the dose has to be renewed constantly to keep up a level.

Hughes: Where did those patients stay during the course of treatment?

Dettner: I don't know because patients were responsible for making their own living arrangements.

Hughes: That was up to them? Was there a hospital on the Berkeley campus at that point?

Dettner: No, but there is no reason to hospitalize patients who are receiving P^{32} . They remain ambulatory and are able to carry on their activities without interruption.

Hughes: Were there side effects to P^{32} treatment?

Dettner: No. It really is a very mild method of treatment.

Physical Layout of the Laboratory

Hughes: Describe the physical layout of Crocker Lab.

Dettner: There was a little building. You know the story about that.

Hughes: I've only seen pictures.

Dettner: You entered and on one side was a small office which was occupied by John Lawrence. Across the hall from that was a large room which had benches all around the windows, and where all kinds of activities could be carried on. Off of that room was a smaller room which was the animal room, where we kept a large colony of mice and quite a few rats and a few rabbits. The cyclotron was at the opposite end of the building from the front door. It occupied about one-third of the building at the back. Between the front and the cyclotron, there were little offices. Joseph Hamilton had an office and maybe somebody else had an office, and there were little rooms where patients could be treated and allowed to rest after treatment. That was all there was to it. Maybe about four such rooms.

Hughes: And by the time you arrived, it was the sixty-inch cyclotron, the so-called medical cyclotron?

Dettner: Right.

Hughes: Was it a sophisticated-looking instrument?

Dettner: To me it certainly was. I suppose a physicist would say it was as primitive as a kettle drum.

Diego Rivera's Visit

Dettner: We had some interesting times. My family always seemed to be a magnet for artistic people and musical people. They were always coming to visit. One time Diego Rivera, the Mexican artist, was in San Francisco. When Rivera heard that I had anything whatever to do with the cyclotron, he almost died of interest and curiosity. Such a structure to him would be very challenging.

With my breath held, I said to John Lawrence one day, "You know Diego Rivera is in San Francisco and above all things he would love to see the cyclotron. What do you think about it?" He said, "Why not? Wonderful." To have heard that Rivera was a hot Communist would have shocked the Lawrences no end, so I didn't mention his political preferences at all.

John was all for plenty of publicity and let's get people to understand the great work that's going on over here. At any rate, Rivera arrived with his small retinue and John took them to lunch, asked me to join them for lunch, and I said I couldn't. I was too busy.

Hughes: You didn't want to get into the politics?

Dettner: I didn't want to get into the politics. And there were no politics because Rivera was just thrilled at the spectacle of this tremendous machine and what it could do. So it all went off very smoothly.

Also at the same time, I was able to get John a \$50,000 grant from a local family foundation of which I knew the director very well.

Hughes: Was that Columbia?

Dettner: Yes. So all of this cemented John's feelings toward me somewhat.

Hughes: That was when Marjorie Elkus was their executive. How had you gotten to know her?

Dettner: Many members of the Elkus family had been friends of my family over the years, and I had been active in many ways which brought me into contact with people in San Francisco. I had great admiration for the Radiation Lab and I thought its efforts should be promoted and supported.

I should say, too, that I was working for \$125 a month. After my [first] conversation with John, he then wrote me saying that he would like very much to have me join the staff, and he would offer me \$1400 a year. It was still very much the Depression and this was a chance to get into what I hoped was my own field so, of course, I grabbed it.

Hughes: So you were thinking of making a career in research in this area.

Dettner: Yes, I had done all these public things and they interested me very much, but I realized they weren't the whole basis for a life. I wanted to get back to my major interest, which was biochemistry.

Hughes: What position did you have?

Dettner: You can't call it anything. I just was there. It was the most unstructured situation. I suppose some fiscal authority had to have some title for me, but I don't have any idea what it was.

John H. Lawrence, M.D.

Hughes: You alluded to John Lawrence and his interest, which certainly was shared with his brother, in publicizing what the cyclotron could do. What was he like as a person?

Dettner: He was a very nice person. I always liked him very much and I felt that he treated me with great consideration. He was very supportive

of Bela Low-Beer, too, whom he admired and whom he believed was a valuable contributor to scientific progress.

Hughes: Did he come across as the head of the show, so to speak?

Dettner: John? Oh, no, Ernest was head of the show. Nobody could come near. John was not--what shall I say? People always liked John, but there was nothing flamboyant about him; nothing that suggested genius at work, really not. They were Norwegians [in background] and I always thought that both Ernest and John were a little stodgy in a Scandinavian way, if you know what I mean.

Hughes: I do know what you mean.

Dettner: And John more so than Ernest. Ernest was far more outgoing, I think. But John was a very nice person, and he really was a very good friend to my husband and to me, too.

Hughes: Do you think there was any feeling on John Lawrence's part of being in the shadow?

Dettner: Perhaps. Everybody revered Ernest as though he walked on clouds and the rest of us walked in the gutter.

Hughes: Would you say John had to establish his own position?

Dettner: Maybe, although his position was totally different. Ernest had no qualifications in medicine and John was a full-fledged medical person. There should have been enough career separation to avoid any kind of friction. I think John absolutely revered Ernest, as most people did. But it's hard to say.

Joseph G. Hamilton, M.D.

Hughes: You've talked a little bit about Joseph Hamilton off tape. Would you mind repeating what he was like as a person and also how he dealt with his own personal safety?

Dettner: He didn't deal with it at all. He took every chance you could possibly take. Joe Hamilton was very sure of himself, and he was somewhat overbearing. He was determined to make a great name for himself. He was rash and likely to take chances. The chances he took with himself belied his own scientific knowledge. He was a driver and pushed very hard for a great reputation.

Hughes: Did you feel he was competent?

Dettner: I think there was no question he was competent.

Hughes: He came from neurology, I understand. I guess everybody working with artificial isotopes at that time had to pretty much start from scratch.

Dettner: I was going to say everybody had to come from some other background, because this field hadn't existed previously. I guess he was probably a very competent physician. I don't know, because I never saw him function as a physician. But he was overbearing and he was ambitious, enormously ambitious.

Hughes: Where was he in the hierarchy of Crocker Radiation Lab?

Dettner: He was right [in] close to John and Ernest.

Metabolic Studies on Plutonium and Radioactive Strontium

Hughes: So the two of them were pretty much running the laboratory?

Dettner: Yes. Although I think Joe had very little interest in administration as such. He wanted very much to push the possibilities of plutonium.

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Dettner: That was the overriding interest. One could almost say that the interest at Crocker at that time was either neutrons or plutonium.

Hughes: The plutonium came during the war, didn't it?

Dettner: You mean on account of the bomb? I mean in consideration of the biological effects of these new kinds of radiation, plutonium on one hand and the neutrons on the other. The use of P³² was just incidental and a very minor part of the major focus, which was on plutonium.

Hughes: Well, the subject that has been in the news lately is that of injections of humans with plutonium that occurred in those years. Were you aware of any of those going on?

Dettner: No.

Hughes: Was that because plutonium was a classified topic? Would it directly follow that the research with human subjects would not have been commonly talked about?

Dettner: Quite right.

Hughes: It was a secret subject then.

Dettner: Yes. The treatment of human people with P^{32} , for instance, was well known and no holds barred on that. It was also perfectly acknowledged that a lot of animal work was being done with other radioactive isotopes such as strontium, and many others. That was the purpose of the animal colony.

This book, as you know, goes into a whole lot of detail about the uses of a great many radioactive isotopes in biological research.¹ My husband and I did several experiments. There's one I'm looking for, the strontium. [Looks through book.]

Hughes: Was this when you developed the bioassay procedures?

Dettner: No. There was no bioassay program at Berkeley at this time. That was later.

Hughes: Now this was all animal work, right?

Dettner: Yes.

Hughes: You were never involved in any research involving human beings?

Dettner: No. Except to monitor what was happening to them if they were under therapy. For example, we did a study of the uptake of strontium in bone. Strontium is a bone-seeker and skin-seeker; it was through this knowledge that my husband developed the use of strontium as a therapy in that horrible disease where the skin is involved--mycosis fungoides.

Anyway, the metabolic behavior of these isotopes constitutes an extremely important avenue of research. Their affinities and their biological behavior could never have been traced except that they were radioactive. One could study a great many pathological conditions and determine not only the therapeutic effect of these isotopes, but learn something about the condition itself, which made [the studies] extremely important.

Much later, in my work at the [Berkeley] Radiation Lab, I did a number of studies of the metabolism of the transplutonium elements, which are interesting too. They, too, have their affinities as you will read in the reprint of my article on the bioassay of transplutonium elements.² It gives you a picture of this [process].

¹Bertram V.A. Low-Beer, *The Clinical Uses of Radioisotopes*, Springfield, Illinois: Charles C. Thomas, 1950.

²Anne deG. Low-Beer [Dettner], "Bioassay of transplutonium elements," in *Handbook of Experimental Pharmacology*. H.C. Hodge, J. N. Stannard, and J.B. Hursh, eds., vol. 36, 1973, 593-611.

Hughes: Do you remember when you started working with the transplutonium elements?

Dettner: Not until I went back to the [Berkeley] lab in 1960.

VIII LIFE WITH BELA (BERTRAM V.A.) LOW-BEER, 1941-1955

Dr. Low-Beer at the Berkeley Radiation Lab and University of California Medical School

Hughes: This would be a good place to talk about Doctor Low-Beer.

Dettner: Bela arrived in 1941 and we did a lot of work together at the Berkeley Radiation Lab. I should mention, I guess, that he originally applied for an immigration visa for the United States in 1935 because he had attended an international radiological congress in the East in that year. He visited a lot of research centers and was tremendously impressed with the opportunities and facilities for research that didn't exist in Europe, to anything like the degree that we had them here.

So he went home to Prague. He had no ties. He wasn't married or anything that would keep him in Czechoslovakia, and he thought, "I want to go to the United States and I feel that I could really develop my career there better than anywhere." So he applied for an immigration visa, but it didn't come through and didn't come through.

Finally he had to leave Czechoslovakia on account of the Nazis influence, so he went and spent some time at the Curie Institute in Paris, and then he went to Birmingham [England] where there was a cyclotron,¹ although I don't think their cyclotron was as versatile as Lawrence's. He was there when the blitz of England was going on full-force.

The person in charge of that cyclotron was a Professor Oliphant from Australia, Marcus Oliphant, who became a great friend of my husband. He said, "When you get to the United States, you would make the greatest mistake if you settled anywhere without first having a visit at the Berkeley Radiation Laboratory."

¹Balance of this paragraph from Tape 9.

Bela was already very much interested in radioactive isotopes, and the only one available from the Birmingham cyclotron was radioactive iodine. So while he was there as a visitor, he did some work with that and was extremely interested in seeing how one can trace the course of absorption and excretion of any chemical material through the factor of its radioactivity.

So he did write to Ernest Lawrence and said he would very much appreciate the opportunity to visit the Radiation Lab when he came to the United States. He, of course, was invited. Professor Oliphant had also said to him, "Now don't make just a short visit, running in and running out. You plan to stay several months and you'll find it extremely interesting." So he did.

The medical school¹ had its eye on him from the start, and the minute his visit was over he was invited to join the faculty, which he did at the beginning of 1943. He joined the faculty and then within a year effected the separation of the therapy and diagnostic aspects of radiology and became chairman of the therapeutic end.

Hughes: Up until then it had been together?

Dettner: It was usually combined. In early days, radiologists were trained chiefly for diagnostics which is a discipline based on structure. Anatomy is its basis. Bela had already realized that therapy is a separate field of medicine concerned with function, and greatly enlarged by the existence of chemicals that could be made radioactive.

Hughes: Had he, in Prague, been practicing therapeutic radiology?

Dettner: Yes. He was always a therapeutic radiologist. He had his education at the famous Charles University in Prague and then spent a couple of years in Berlin in postdoctoral training. But always his field was therapy, not diagnostics.

Hughes: Did he use radium as well as x-rays?

Dettner: Oh, yes.

I thought it was interesting that he wasn't at the medical school any time before they split the department. Dr. Stone, the chairman, was very amenable. I think he recognized that he had in Bela a real authority, and it certainly worked out extremely well. There is really no reason why those two specialties should be combined in a department of radiology.

Hughes: What had happened to neutron therapy by 1943?

¹Now the University of California, San Francisco.

Dettner: It was pretty much over. The patients who received it were all terminal cancer patients recruited from San Francisco General Hospital, and it was there that they all came to autopsy. The cries about the condition of their tissues when they came to autopsy became pretty loud and so it was generally decided neutrons are not good for people. However, it was also realized that the neutron doses used on these patients were inadmissibly high.

Hughes: Another thing that happened too, is that Robert Stone went to Chicago during the war. Do you remember that? He became associated with the war effort. So he was not even there on the scene of neutron therapy.

Dettner: No, Earl Miller was there.

Hughes: Earl Miller took over. Did he take over the neutron therapy?

Dettner: No. The neutron therapy by that time was not going on any more.

Marriage and Working Together

Dettner: I was more or less drafted for a war job about the time that Bela finished his visit to the Berkeley lab. I decided I had better do this [and be] part of the war effort.

Hughes: What was the job?

Dettner: It was in the War Manpower Commission, and it was chiefly concerned with the recruitment of women.¹ I joined the regional staff, which was headquartered in San Francisco and covered five western states. My job was going around and seeing that women were getting into the labor force and that they were being treated properly when they got there.

Hughes: So you had to completely give up science?

Dettner: I did for that time. Then Bela and I were married before the war was over; in 1944. I think he sort of missed me [at the medical school,] because he was always grinding out a paper. As I said before [off tape], I was more helpful to him on the English than anything else. He didn't need any help on the science.

Hughes: You said that you immediately began to work with him when he arrived in Berkeley.

¹For additional information on the manpower commission, see Chapter X.

Dettner: He was so delighted, because I wasn't so occupied that I couldn't give a lot of attention to his needs. His needs were getting material cast in proper English that somebody else could understand.

Hughes: You weren't working at the bench with him?

Dettner: We did. We did all these animal studies which are recited in the book. We did those together.

Hughes: So those studies were begun in his Berkeley days?

Dettner: A great many of them, anyway, are from his time in Berkeley. Then the medical school gave me an appointment as a research fellow in radiology. This was to calm Dr. Stone's nerves, because if I were injured, nobody would be responsible if I didn't have an actual appointment. I couldn't have employment with pay, because that's nepotism, but I could have an appointment. So they gave me an appointment as a research fellow in radiology.

Hughes: Was that the end of your official tie with Crocker?

Dettner: Yes, [for that period anyway].

Hughes: You moved across to San Francisco?

Dettner: I worked there with Bela as long as he lived [1955] and a year or so beyond. I put together some of his last work so that it was ready for publication.

Hughes: Was there anybody else in the therapeutic section?

Dettner: At the hospital?

Hughes: Yes.

Dettner: Yes, he had some postdoc students. But they, of course, didn't stay forever. Several of them are men--I can't think of any women--who have become well known in their field and who chose to be trained in therapeutic radiology.

Hughes: Did Robert Stone let the two of you run your show?

Dettner: Yes. He was very impressed with Bela, no question. Bela aroused different reactions in different people. Dr. Stone was wise enough to know that he [Bela] could make an enormous contribution to the field of radiology, so he was very encouraging and saw to it that he had what he needed. Some other people were jealous and made it difficult. These things happen in any kind of school, but in medicine particularly.

Hughes: We've talked a long time but I [would like to include the] remark that you made off tape [about] your contribution to your husband's work.

Dettner: It's a fact that I wrote the whole book except the physics. [Bela's] English by that time was a lot better, but it wasn't really good. Also, I knew the work thoroughly, and some of it was my own work.

There is one particular study with strontium which is attributed to me.¹ I was the senior author on the paper because John Lawrence insisted on it. Bela would never have thought that was a good idea, and he didn't.

Hughes: Is that an instance where the fact that you were a woman made a difference?

Dettner: It only made a difference as far as my personal relationship with Bela was concerned. It didn't make a difference to John Lawrence. He thought I should be the senior author of the paper, and in fact he insisted that I be it. He said [to my husband], "You've had the last two papers; it's Anne's turn." In each of [those] cases, I had organized the project and carried it through; then I wrote it up.

Hughes: Did you work as a team?

Dettner: The best thing in our relationship was our working relationship; it was always great. When we were no longer occupied with some project, it could be difficult. He was a temperamental foreigner and he was terribly jealous of his reputation.

Bela's Successor, Franz Buschke, M.D.

Hughes: Does the name Franz Buschke mean anything to you?

Dettner: It certainly does.

Hughes: As I remember, he was also doing therapeutic radiology.

Dettner: He was a therapeutic radiologist, and he was working at the Anderson Clinic at the University of Washington in Seattle. When Bela died, our great friend Lewis Morrison, who was in ENT [ear, nose and throat specialist] and very much a force in the medical school,

¹A. deG. Treadwell [Dettner], B.V.A. Low-Beer, H.L. Friedell, and J. H. Lawrence. "Metabolic studies on neoplasms of bone with the aid of radioactive strontium." *American Journal of Medical Science*, 1942, 204: 521.

called me almost immediately. Of course, he knew of Bela's illness. They were very very close friends.

I don't think it was more than a week after Bela had died that Lew asked me to come over. He said, "We've got to be very careful about getting somebody to fill that niche in therapeutic radiology, because now it is an established niche. Who are your choices for therapeutic radiologist?" I had about five names which I gave him, and Buschke was the choice. Buschke had been down here to visit Bela not too long before he died, and he stayed with us while he was here. He was an old friend from Germany. He seemed the natural successor. He was delighted to come to the medical school. So that was that.

Hughes: Did you work with him?

Dettner: No. As I say, I stayed on about a year or more, but only to get Bela's work put together in some form that it could either be published or not.

Radiation Safety Committee at the Medical School

Hughes: Let's talk about the memo I showed you, written by your husband, about the instigation of a statewide radiation safety committee.

Dettner: President [Robert Gordon] Sproul ordered the setting up of the committee and named Bela as chairman of it from the very beginning.¹ One of the things that the committee provided for was that there be a committee on radiation safety in every facility that operated a radiological lab.

Hughes: You said off tape that it was a bit of an irony that your husband became chairman of the committee.

Dettner: It was ironic that he developed leukemia, because he was obsessed with the question of safety at all times, although he hadn't been in his own practice in Prague. In his own practice in Prague he was using instruments which, I guess, he thought he knew how to use safely. But here, in San Francisco, with the place just awash with materials that were exuding radiation, that was quite a different story. He felt that the strictest rules should be applied in every

¹According to the memo, the Committee on Radiological Safety and Human Applications of Radioactive Materials was appointed by Dean Francis Smyth of the School of Medicine on July 6, 1949. Special Collections, UCSF Library, exact source unknown.

single laboratory where people were working with these radioactive materials.

Hughes: How were those rules enforced?

Dettner: They were enforced, I presume, just through the intelligence of the people on the committee who knew what they were working with and had guidelines and saw to it that they were followed. I mean, what else could you do? Of course, there is a group, which operates in all labs of this sort, called the health physics people. They go around and monitor the environment using Geiger counters and similar instruments to see if there's radiation loose around anyplace. But that's it. The facilities at least are kept pure as possible. Then the bioassay program sees to it that the workers themselves are kept uncontaminated. If they are contaminated, appropriate steps are taken to alleviate this condition.

Dr. Low-Beer's Leukemia

Hughes: The other, poignant irony that you pointed out off tape in connection with his chairmanship of the committee was that at that point he must have been developing leukemia himself, dating back to these unshielded machines in Prague.

Dettner: The leukemia could not have been apparent for very long before his diagnosis was established, because it was a rule at the medical school that anyone working with or about or near radiation had his blood count taken every three months without any question.

We had been on sabbatical, so we had been away for nine months. We came back, and the technician came around one morning and said, "Oh, I guess I don't have to bother you, Dr. Low-Beer." So she went on her way. Then she came back and said, "They say I have to get your blood count anyway, even though you've been away." And there it was.

Hughes: There had been no symptoms?

Dettner: Not at all, because he didn't have any blood counts taken while we were on sabbatical. Until we went, he had a blood count every three months just like all people working around radiation.

Hughes: Did he take P³²?

Dettner: Yes. At that time, and for quite a long time afterwards, it was considered the treatment of choice for chronic leukemias, and also it had some usefulness in polycythemia and certain other blood dyscrasias.

Hughes: Did it help your husband?

Dettner: Symptomatically, it's wonderful. It doesn't do anything to prolong life. The statistical average for longevity after diagnosis of chronic myeloid leukemia is four years and eight months. If one has P³² treatments, the time is exactly the same, but one doesn't have a lot of the symptoms. It's very good at controlling symptoms. Nobody could have been more active than he was until three months before he died.

Hughes: Did he have to retire?

Dettner: He was in the hospital. He was just completely shot. He found hot water very comforting. We had built a house in Larkspur at the beginning of his illness because he really was eager not to have to spend weekends in San Francisco. It was a very good thing to have done. He was interested in the garden; he worked hard in the garden. In fact he could do everything. This is what P³² does: It enables one to carry on one's life completely as though one were well, until the moment comes when it's no longer effective.

Hamilton's Leukemia##

Hughes: Two years later [1957] Joseph Hamilton [also] died of leukemia. Was it myeloid?

Dettner: It was myeloid, but I think it was acute when it was diagnosed. I'm pretty sure it was because it just happened that our niece, Mary, was still in school but she had a job at the Radiation Lab, and she was taking blood counts. This is rather interesting--she was the technician who took Joe Hamilton's blood count, the decisive blood count. She was simply appalled. She saw this and she didn't know what to do.

Obviously, she didn't rush to Joe Hamilton and tell him what she'd seen but she talked to someone. She didn't talk to John Lawrence. She talked to one of the doctors. It was disclosed to Doctor John Lawrence. I don't know how frequently they did blood counts in Donner at that point.

Hughes: So if it was acute leukemia, that must have been 1956 or 1957, very close to when he actually died.

Dettner: It was. He didn't live more than a few months after the diagnosis.

Hughes: What do you suspect to have been the source of his problem? Exposure?

Dettner: He was very confident, and he was very dedicated to investigation. He felt everything was to be learned from the use of the new radioactive materials that the cyclotron produced. But he was very careless. He apparently never realized the danger to himself of the methods he was using.

After his diagnosis was established, it was found that he had powerful [radioactive] sources just open in his desk. It just does not bespeak a very careful attitude. He was very self-confident, and he was very dedicated to pushing his knowledge just as far as he could with these new tools, but he did not take the precautions that would have been wise.

Hughes: How was external radiation being measured?

Dettner: How do you mean?

Hughes: How did they know what the cyclotron was emitting?

Dettner: You mean what the absorbed [biological] dose would be?

Hughes: That's part of it.

Dettner: I don't know that they really had any good method of determining the absorbed dose. But they knew, of course, what [type of radiation] left the cyclotron and was directed to the tissues of the person. But in Bela's book, the part about physics, there's a whole lot of discussion about [tissue] penetration and how you measure it, which would apply as much to neutrons as to any of the other types of radiation.

For example, Bela was extremely interested in the possibility of using cobalt as a radiation source for external treatment, because of its stability and because the isotope emits radiation in one channel only. So its energy is constant and also has a very long half-life. In other words, it contributes to the accuracy of dosimetry, as ordinary x-rays and radium do not. It's considered a very desirable tool for whole-body radiation. As I say, there's a lot of material in this book that describes exactly how it's measured and how it behaves.

Hughes: Do you remember what the reaction of radiologists was in those early days to the use of radioisotopes in therapy?

Dettner: I don't think I can tell you much except to say that the demand for P^{32} was universal. Everybody in the country, every medical person who had leukemia patients, was using it. Leukemia is a hopeless condition. You know it's only going to get worse. You know the patient is going to die. If there's anything that will prolong his life a week or give him any comfort you want to use it, if you're a conscientious doctor.

When P³² was first being used, I don't think anybody hoped that it would actually effect a cure, but they thought it might prolong life considerably. But it doesn't. What it does is relieve symptoms enormously so that the patient can lead a perfectly normal life until the very end when everything blows up, nothing does any good.

Hughes: [Would you have helped develop the method] I read about that Dr. Low-Beer developed for treating certain types of skin cancer?¹

Dettner: No. He made little circles of blotting paper which he immersed in a solution of P³², had them dried, put on the lesion, whatever it was, secured them with tape, and left them on. It was very effective in some cases.

Hughes: Did [results vary among] types of cancer or from individual to individual?

Dettner: No, it was not individual. It was the type of lesion that dictated its use.

Low-Beer Family During World War II##²

Morris: How did you happen to have Bela's niece Mary come live with you? Had she lost her family in the war?

Dettner: She had a dreadful experience in the war. She was born in Budapest. She was in the last group of young people that the Nazis were taking into Germany. Whether they intended to drop them off at Dachau or whether they were going to use them in work camps, nobody knows. She was rescued by a young German officer.

Morris: The Low-Beers were Jewish?

Dettner: Yes. The German officer was not concerned with her sexually or anything of the sort. What he did was pull her out of this mob and take her to his wife in Munich. She was able to get a Red Cross letter to us within weeks of the end of the war. Of course, she wanted above all things to come to her uncle. She adored Bela.

Morris: Their families had been close?

¹See Low-Beer, *The Clinical Use of Radioisotopes*, pp. 310-311.

²The following discussion of the Low-Beer family [recorded on February 7, 1995] and 1951 sabbatical [recorded on December 11, 1995] have been relocated here for continuity.

Dettner: To him. He had said always that when Mary was ready for college he wanted to take her to Prague and supervise her education. It was quite a natural thing for her to want to come to him. We did everything we could to expedite her coming to San Francisco. I had a great friend, for one thing, in the state department. He did everything he could--everybody did everything.

One of my Moore cousins from New York, whom I had never met because he was so young, was a private in the U.S. Army stationed in Berlin. He got a pass from his commanding officer to go to Munich for three days. He combed every haunt of Jewish refugees, but he didn't find her. He was terribly apologetic. He is a darling person. Just really a lovely person. He felt he had failed us, and failed Mary, failed everybody. He just felt awful.

It turned out that Mary was happily doing a job for UNRRA [United Nations Relief and Relocation Administration] relocating displaced persons because she could speak all these East European languages like Polish and Hungarian. She had no trouble at all. She was dying to get out of Europe and come to us.

Morris: What had happened to the German officer and his family?

Dettner: He came home to Munich and lived a long and prosperous life and died. I met his wife and family there years later. This was 1946. Mary was twenty-something. She wasn't in Munich five minutes before she had a job with UNRRA. There was nothing to it.

We had more letters and we knew what she was doing, she was all right, and that she was keeping her eyes open for every opportunity to get here. She finally got one. After all, she was right at the fountainhead of opportunities. She could see what ships were going, what ships were taking refugees. She got herself onto one. Within six months she was here.

She had upper-division standing because she had been through gymnasium in Budapest. She met this wonderful graduate student in physics whom she married. He is now Doctor Edward L. Chupp. He really is a very special person. She is awfully lucky.

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[Morris: What happened to the rest of the family?]

Dettner: Mary's mother stayed in Budapest throughout the war. Elsie was rather difficult. We saw her briefly in Salzberg in the early fifties when she was on her way to Canada to make her home with Bela's brother Alader Low-Beer. His first wife and son had died at Belsen-Bergen, but he had managed to survive, and was living in Montreal with a new wife.

Morris: Did Mary complete her own professional training?

Dettner: No, she didn't. She got her B.A. in Berkeley, married Edward Chupp, and became a great help to her husband. They have had three delightful children and now a delightful and growing lot of grandchildren.

Morris: Is she the mother of the very delightful young man that I met?

Dettner: That is the young man, yes, Timothy. The young man, and his own young man is up there on the mantelpiece.

Morris: I was looking at that picture. That is charming.

Dettner: Mary was awfully fortunate because Ed is really a wonderful person. The children are all excellent. Timothy--obviously I am brazen about my affection for him.

Morris: In a way he is carrying on his great-uncle's tradition.

Dettner: Also his father's. His father is a physicist. His father is a professor of physics at the University of New Hampshire. Timothy is now a full professor at Michigan.

Morris: His mother didn't really need raising. She needed help getting started in the United States?

Dettner: That's right. Doctor Low-Beer had no children. Mary was the closest to it.

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Morris: And he had never married.

Dettner: I think he had a great many romances, long and short, but he was never married.

I don't know what finally broke down his reserves in that regard. We had a wonderfully good working relationship; when we had a project going on it was just fine. When I was merely a wife it was not so fine. He was a very demanding person.

Morris: He was comfortable with your doing the draft of papers and writing the book?

Dettner: Comfortable? He expected it. When he came he had a lot of trouble with written English. He spoke pretty well, but not tremendously well. He got much better, of course. His written English was a disaster.

[In spite of that,] I think he was really very glad that he had come here. He liked the United States. He certainly had tremendous opportunities. He was welcomed with open arms.

Morris: It sounds as if the field was so small that there was one collegiate group around the world that knew of each other. In those days, Berkeley could just make a place for him?

Dettner: That's right. He was a guest at the radiation lab. There was no remuneration at all. When he went on the faculty at the medical school he [didn't have much of] a salary. He was not only a full professor of radiology, but he was the head of the therapeutic end of the department. His entire salary was \$26,000.

Morris: In 1942?

Dettner: 1942 through 1944.

Morris: By today's standards that is not very good, but in those days--

Dettner: It was not considered bad then at all, [but it certainly wasn't lavish. When we got married and I was appointed a research fellow,] I got no salary. The university doesn't believe in nepotism, as you know.

1951 Sabbatical in Europe##

Morris: You wanted to tell us more about the sabbatical you and Bela took in 1951? Was there a special reason for taking it then?

Dettner: Well, only that it was time, and Bela, of course, was interested in going back to Europe and renewing his connections there and seeing new things. We sailed on a Holland-America liner right after Christmas, and landed in the Netherlands, where we spent a few days, and went on then to the Scandinavian countries, which was a great experience, for me especially, because I had introductions through my own activities to people who were doing significant things outside of the field of science.

For example, we had had a visitor at the Florence Crittenden home, of which I was a board member, a woman who was active in the social work activities of Denmark. I had been able to show her a number of things in San Francisco that interested her. When we were in Denmark, she went to great effort to allow me to see all sorts of activities in the social work field there. She and her sister were most hospitable, as all Scandinavians were, and saw to it that we had a delightful social time.

Morris: What was her name?

Dettner: Bruun, [spells]. Miss Alice Bruun. I realized that all I'd heard about Scandinavian hospitality was understatement, because never have we been so feted and wined and dined as we were all through Scandinavia. It was simply incredible. Miss Bruun and her sister had a beautiful dinner party for us, we had a delicious dinner. We repaired to the drawing room after dinner, and about eleven o'clock, coffee was served and a cake which the cook had made since dinner. That's something that I have never forgotten. Well, of course, all the Danish ladies were quite heavy, and you could understand why.

Morris: Yes.

Dettner: But it was a tremendous experience.

In Sweden, I had been asked by a friend here to find out what I could about how they were using the Carrie Chapman Catt money from the League of Women Voters. She was a person who had a particular interest in that fund, my friend here. She wanted to know some details about how it was being used.

Morris: And what did you learn?

Dettner: Well, in a perfectly reasonable way, to stimulate women's activities, which is what it was intended to do. It was being administered by a woman archaeologist named Dr. Rudh [spells]. She first sent her secretary when she learned that I was there and was interested in the Catt money, and then I saw Dr. Rudh herself. She not only gave me all the information that I needed or wanted, but she had a party for us too.

At the party, we met all the diplomatic corps of Sweden. And we were invited to the first-year celebration of India's independence, because a young Nehru, a nephew of the prime minister, was their ambassador to Sweden. That was very glamorous.

And then on the other side, the brother of Dr. Stone, the chairman of Bela's department here, was the Canadian minister to Sweden. We were entertained by them and met a great many of the diplomatic corps. So Sweden was a very exciting period.

Morris: Did women have the vote in Sweden at that point?

Dettner: Oh, yes. And they were being very active, and there were interesting women in public affairs, and doing what they were supposed to do with the Catt money. I was able to tell my friend here that she shouldn't have any worries about it.

Morris: Was that money that Carrie Chapman Catt had inherited from her husband, the San Francisco engineer?

Dettner: I don't really know how the fund started, but it is a fairly big fund within the national league.

Then in Norway, life was much quieter. We were visiting a radiologist in Bergen who was well known throughout Europe, I guess, and my husband had particular regard for him and his work and really wanted to spend his time with him. So that's where we were; it was delightful, but it was not exciting. And Norway is a beautiful country. All this took place in January, so we didn't see Scandinavia at its best. One wore double clothes all the time. It was frightfully cold. In Sweden, one day the sun came out. One day in all the time we were in Scandinavia.

Morris: Oh, dear. How did Bela get on with the women from the Carrie Chapman Catt fund?

Dettner: Oh, his contact with them was completely social, and they were gracious and charming, and so he thought it was fine. He was no more interested in the Catt fund than I was in the intricacies of radiology. [laughs]

Then--of course, we went to Uppsala, and that was exciting, and saw their cyclotron. Of course, I was enormously interested in the Swedish medical service setup, how everybody pays a tiny bit and has his health protected in every way. I think it's a wonderful system. And it was interesting to see it, because in England, the National Health Service had just begun, and it was a dismal failure for many of the people involved in it, particularly for the internists and GPs, because their compensation amounted to a certain number of shillings per year per patient. And in order to make a living at all, they had to have such enormous panels that the patients got no service--couldn't. It was, oh, just a dreadful state of affairs, whereas the surgeons were doing very well.

Morris: That's interesting, that there was that distinction between different medical specialties.

Dettner: Oh, absolutely. From the surgeons' point of view, it was delightful. They were able to keep their private practice and simply gave hours to the National Service which they would otherwise have given as free service anyway. [What it amounted to was that] the National Service paid their overhead expenses in their private offices, and they continued to have their private practice. And it was the surgeons, of course, who pushed the National Health Service plan.

The other shortcoming of the plan was that it was put into effect long before there were enough hospitals to take care of the people who needed them.

Morris: So they hadn't planned on what the caseload, what the need for medical service was?

Dettner: No.

Morris: So were these all people that Bela had worked with when he had still been in Europe, that he went to see?

Dettner: Not all, but many of them, yes. You know, they had international meetings all the time; so, of course, the famous ones get together and they know each other. So no, he had no problem in making contacts. In fact, everybody greeted him with open arms. He had a wonderful time.

Morris: Did somebody make all these arrangements before you left the Bay Area?

Dettner: I don't think so. I think he probably sent letters to people in various countries to say that he was coming, and everybody's arms were open. As I say, the social activities were just overwhelming.

Morris: How nice.

Dettner: All through Scandinavia. Then from Scandinavia, we went to England where we were for six months. Most of that time, we were in London, but a couple of months at Cambridge. At Cambridge, there was a particular laboratory of radiological research, biological research, which is headed by a radiologist named J. S. Mitchell. Bela was very anxious to spend some time with him. We did, we stayed in Cambridge for a couple of months.

I went to the lab every day, because they were doing some very interesting work that involved tissue cultures, and I learned the techniques to do those things. We did actually use some of them after we got home. But altogether, it was an interesting time.

Bela had been invited to address the Royal Medical Society of England, which was a huge undertaking, and I spent a lot of time at the typewriter doing his speech. And oh, yes, for that, we had to transport white tie and tails during the whole sabbatical, even though they appeared only once.

Morris: Was that the only time he wore white tie?

Dettner: Well, I think maybe going to the opera in Stockholm he did, but other than that, no. And he could have gone to the opera in Stockholm without. He could have gone in a jacket.

Morris: But he couldn't have worn a dinner jacket to the Royal Medical Society?

Dettner: No, no!

Morris: Was that his decree or was that what you were led--

Dettner: Well, that was his understanding anyway. I don't know whose decree it was.

Morris: And did you get a new ball gown for these affairs?

Dettner: I didn't go to it. I wasn't supposed to go to it.

Morris: Oh, dear!

Dettner: No. I spent hours on his speech, over and over and over, but no, I wasn't supposed to go. There was nothing social about it.

Morris: He told you what he had in mind, and you wrote it, or he just paced the room declaiming?

Dettner: That was the usual method. He would tell me what he had in mind, and I would turn it into English. Yes. I guess it was a very good speech. Anyway, it was well received and he was very steamed up about it.

Morris: That seems to be the accepted approach, at least in politics, that somebody drafts the speech for the great man, and he adds a few personal touches, or she adds a few personal touches.

Dettner: Yes, that's right. And, of course, I didn't go to it. I wasn't allowed to go to it.

Morris: Did they give him an honorary degree or other honor?

Dettner: No, I don't think so. They gave him a big hand. He evidently felt it was a very satisfying experience.

We had an experience about London which I thought was sort of interesting. Going over on the Holland-America Line, we shared a table with a delightful couple who had spent their whole married life in the East Indies where the husband had been in charge of a number of rubber plantations.

During the war they were both interned by the Japanese, in separate camps, and they didn't know until they got out, each didn't know if the other was still alive. The method of informing families was that if someone died or was killed in a camp, his or her shoes were left at the entrance to the other camp, the men's camp or the women's camp, whichever it was. If you recognized your husband's shoes, you could tell by that that he was no more.

Fortunately, that didn't happen to them, but they apparently came out as skeletons, and they were months being physically rehabilitated. When we met them, they were on their way back to Holland, because he was to be the representative in the United States of the Holland rayon industry, so they were going home for briefing. They were charming people, and we had a lovely time with them.

But what I was about to tell you, when they knew that we were going to be in London for a long time and we didn't want to stay in a hotel, they recommended a service flat that they had stayed in on Jermyn Street, wonderfully located, just off Picadilly. I wrote from Stockholm to make a reservation in it, and they wrote back delighted to have us, and charged us what I thought was just a ridiculously low rate. I didn't realize until we'd been in London for quite a while that had my letter come from New York or San Francisco, it would have been very different.

Morris: [laughs] A much higher rate.

Dettner: Much, much. In other words, we got a rate for the Continent, which at that time was not very prosperous right after the war. But they couldn't have been nicer to us when they discovered their mistake. I mean, they never mentioned the mistake, and they were extremely nice to us. When we went to Cambridge to be gone a month or six weeks, they kept our place for us, and they stored our personal things so we could go back and have the same space when we returned and so on. They couldn't have been nicer.

Morris: Was Professor Mitchell working on the same subject that Bela was?

Dettner: No. Mitchell was not concerned so much with the gadgets of radiology as with the basics, the fundamental biological research, let us say. They were doing a lot of work with tissue cultures and this sort of thing.

Morris: That's the effect of radiation on human tissue or other animal tissue?

Dettner: Yes, right.

Morris: What were they doing there that you hadn't already had some experience of over here?

Dettner: Well, I don't suppose really very much of anything, but it was done in a particularly scholarly way. Dr. Mitchell had attracted a group of scientists younger than himself who were really dedicated, and I was simply amazed at the amount of work that was turned out from that place. I asked myself at one point, how do they do it. I mean, it was a small group of people, but putting out tremendously important work at an enormous rate.

And suddenly I realized: they're not spending all their lives going to committee meetings. I told that to somebody when I got back, a man here who was in the field, and he was much amused; but he thought it was a sound observation, because of course, here, there's one meeting after another. They didn't have any meetings at all, but they just worked and worked and worked, and things came out week by week almost.

Morris: Were they working with clinical patients?

Dettner: Oh, no. No, no. Not at all. It was not a therapeutic or diagnostic institution at all, it was basic investigation of radiation effects on tissue. And of course, Mitchell had a book which was extremely good and is used as a textbook. Anyway, it was a great experience, and as I say, I went to the lab every day and learned their techniques for tissue cultures and so on. It was very good, very good.

Morris: After six months in England, did either of you have any urge to stay in England?

Dettner: Oh, heavens no. I think by that time we'd finished in England, and all of Scandinavia before, I think Bela would have been perfectly happy to come home. But we'd planned these other things.

I went to Paris during the England period, because I had promised I'd see Alice Toklas as soon as possible, and we had a couple of weeks together. Bela went to Manchester where something was going on that he was interested in, and I thought skipping Manchester was a great idea and I'd be fine to go to Paris. I did, and we had a lovely time. And I have spoken earlier of that and my trepidation about Bela's reaction, but it was all very positive. That was fine.

So from Paris, we drove down together to Montpellier, where the chancellor of the University of Montpellier, Dr. Remarque [spells], was a radiologist and a friend of Bela's. They were extremely cordial and nice, and we had a lovely time in Montpellier, and of course, enjoyed the trip through France.

Morris: And by then, it's early summer.

Dettner: Yes, so it was lovely weather. And what we used to do, we got a car in Paris, and what we used to do was to buy a bottle of wine and some sandwiches or something and have a picnic on the way every day, find some meadow and have lunch. It was just delightful.

Then after Montpellier, we went into Italy and drove all the way down as far as Rome. It happened that the Segrés were in Rome, Emilio Segré and his wife, whom we knew very well from Berkeley, of course. So we saw a lot of them while we were in Rome. There

wasn't so much of interest to Bela in Italy, as I recall. In fact, actually, very little. It was mostly that we did sightseeing and enjoyed ourselves. According to Segré's biography, which came out a year or so ago, Palermo was the place to see modern radiological research.

And then we went on to Austria. We could not go to Vienna, because American passports at that time would not allow us to go anywhere where the Russians were. But we had to go to Salzburg, because Bela's sister, who had resisted leaving Hungary all these years, finally decided she would, and so we were to meet her in Salzburg, and she was then going on to Canada to stay with her other brother. That was a disaster.

Living with Leukemia

Morris: So then Bela was really ready to come back to California.

Dettner: Oh, very much so. Very much so. Well, and of course, that was a most dramatic homecoming. We got home on a Thursday.

Morris: Had you been aware that he wasn't feeling well?

Dettner: No, he was fine. In England, he let himself be examined just because he thought it was a good idea. They did everything but a blood count. And, of course, he had had blood counts routinely every three months the whole time he'd been at the university, because that's what they did to the Department of Radiology. He never had anything but a perfectly normal blood count.

Well, anyway, in England, they didn't do a blood count. They did all the other things, and they tested his heart and this and that, said he was fine, and he was fine. I mean, he enjoyed every minute of our time on the Continent.

We got home late on a Thursday, and my very good friend Dorothy Morrison, whose husband was Lew Morrison at the medical school, was waiting for me to go to the mountains for the weekend because she wanted to hear all the adventures before they got diluted. It was fine with Bela, because he just wanted to get out to his office as fast as he could.

So we came home on Monday morning around noon, and I called the hospital to say that I was back, and he said, "I'll be right home." I said, "What do you mean? I'll see you this evening." "No," he said, "I'll be right home." He came home and he said, "I have leukemia."

Morris: Oh, poor man.

Dettner: The day he got back, the Friday, was the day they were doing the routine every three months blood counts, and the technician first said, "Oh, I guess I don't have to bother you, Dr. Low-Beer. You've been away so long." And then she came back and she said, "No, they want the whole department, whether you've been away or not." So he did, and there it was. Now, very likely, when we were in England, if they had done a blood count on him, there would have been some indication. Maybe not the whole picture as it was by the time we got home, but no blood count was taken. He let himself be examined just to be sure.

Morris: Does leukemia normally develop that quickly?

Dettner: No. But I don't understand it, because he had blood counts every three months in the department. Now, we had been away nine months and he hadn't had any blood count.

Morris: So he missed three routine--

Dettner: He missed three routine counts. When it would first have shown up, I have no idea. You can't possibly tell. But there it was, unmistakably. Now, Joe Hamilton didn't have routine counts, because they didn't do them. I never had a blood count while I was working in the radiation lab.

Morris: It was that different between the Berkeley campus and the San Francisco campus?

Dettner: Oh, definitely, sure. Nobody ever thought it was necessary in Berkeley. I mean, it never occurred to anybody that people should have blood counts if they're working with radiation.

Morris: Even though you were doing all this tissue research--

Dettner: Yes, certainly. And you had your hands in up to the elbows in P³² all the time. No, nobody ever took a blood count. Anyway, Bela had them every three months from the moment he went to the medical school, and that was six years or something. [But this time,] there it was, unmistakably.

And as I say, once while we were in England--we were visiting some people in Birmingham who were old friends of Bela's; he had actually stayed with them, I think, during his previous stay in England. The husband was a doctor, and I think they were very distantly related. Anyway, Bela said to the husband, "You know, I think I'd like to have a complete physical while I'm here, if it's all right with you," and of course, they arranged for it. And he was fine. But they didn't do a blood count.

Morris: Odd.

Dettner: Never occurred to them, apparently. So here it was, I mean, the very first minute he got home. Very odd. But it wouldn't have made any difference.

Personal Relationship

Morris: I was wondering if nine months of doing things together day-to-day was a different kind of relationship from working together in a lab.

Dettner: Oh, totally. Yes, the personal difficulties were all there, and somewhat exaggerated because there wasn't a job to be done. Yes, our best relationship was in our work together, by all means, and when there wasn't, it got sticky. I was determined I was going to have a divorce when I got home.

Morris: Had you mentioned that to him at all?

Dettner: No, but on the ship (we came home by ship), Bela said as we were going into New York Harbor, "What are you going to do when we get back to San Francisco?" I said, "I don't know, but I think we have a good deal to talk about." We let it go there. No, I was determined I was not going to go on with this.

Morris: It sounds as if it was a very difficult kind of a relationship for someone who was used to being as independent as you had been.

Dettner: Extremely. Of course, it was being European, and central European, at that. I mean, he had to dominate every situation. He had to be the hero of every occurrence. But on his deathbed, he said to me, "I'm sure you've often felt that I was being very severe with you, but I was only trying to make you perfect."

Morris: [laughs] Oh, that's charming.

Dettner: Isn't that lovely? Yes.

Morris: Well, that was remarkable on your part not to go ahead with the divorce.

Dettner: Oh, not when he had leukemia. How could I? Of course not.

Morris: Not everybody would feel that way.

Dettner: Oh, well, I didn't see what else you could do. Goodness.

Morris: And you decided to move over to Marin County at that point, or had you already been living there?

Dettner: No, Bela was so unhappy on the weekends--he didn't go to the medical school, and he didn't know what to do, and on and on. So first, we thought maybe we could find something to rent, that we could go over for weekends. We had a very charming flat in San Francisco, also here on Russian Hill. It was down on the bottom of the hill, at Broadway and Taylor, very convenient. But he just couldn't bear the weekends in town.

We looked all over Marin to see if there was something we could rent, and there wasn't. He was terribly fussy about where he was going to live. It had to be just right. So we ended up building a house, because what else could you do? I mean, no house was fit for his residence.

Morris: Was this near where you had lived as a child?

Dettner: No. My family always went to Belvedere for the summers. This was in Larkspur, which is very pleasant. We were up on the hill, we had a lovely view of Mount Diablo. It was a quite charming house and worked out very well.

The diagnosis, of course, was made in--oh, dear, when--late September. The house was built the following year, and we moved into it in September. Bela had three years there, and then I continued, because it was a nice house and because I really wasn't sure what I was going to do. But I was running to Berkeley and I was running to San Francisco, and I got sick of it, so I sold it in 1960 for less than it had cost to build it. And the next year [when work began on the commercial development around the Larkspur ferry], I would have made a 300 percent profit. But how can you know these things?

Morris: And when it's time to make a change in your lifestyle--

Dettner: You do it, that's right. Well, I was going to Berkeley, you see, I was already starting on my doctoral education program, and so I was in Berkeley most of the day, and then I was in San Francisco in the evening for anything social, and it was ridiculous. And living all alone in this house was absurd. And the garden needed more upkeep than I was prepared to give it, and altogether, it was just a bad arrangement.

But until the last three months of his life, Bela was going to work every day. This is what I've said I think somewhere in the history: P³² is absolutely marvelous, because it suppresses all the symptoms. It doesn't do a thing to prolong life, but while you're taking it and before the disease gets absolutely final, you're as good as new. And he worked in the garden, he did everything he

wanted, he went swimming, he went walking, he did everything, until the very last three months, and then he really was completely shot.

Morris: It must be a blessing, if you can enjoy life until the last--

Dettner: Wonderful, and that's what P³² does. But that it prolongs life is not so. It doesn't. Because Bela lived the classic time from his diagnosis to his death, which is four years and eight months or so.

Morris: It sounds as if, by and large, although difficult to live with, he had a good life.

Dettner: Oh, he had a wonderful life. He had great successes, he had great admiration, which he certainly loved above everything. He had a devoted slave--

Morris: Was that you?

Dettner: Yes, of course.

Morris: Oh, heavens, how nice of you.

Dettner: What more could you ask? I always enjoyed the work that we did together, because he was very stimulating and he was very good [at what he did]. I thought it was really a great privilege to be able to share as much as I did of his intellectual interest. But in every other way, it was difficult.

Morris: I am glad we talked about this. I think it is important to history to deal with the fact that some personal relationships are not all that one would want them to be. And I don't think it's fair to you just to say it was a marriage made in heaven.

Dettner: [laughs] Oh, I should say not.

Morris: The way you describe it, the intellectual stimulation and satisfaction of working together were very great, but that didn't mean that Bela couldn't be a pain in the neck around the house.

Dettner: True.

Morris: I think that's a combination that people will find true-to-life and meaningful.

Dettner: Okay. I'm perfectly willing.

**IX FURTHER GRADUATE STUDIES; RETURN TO THE BERKELEY CAMPUS,
1960-1973**

Doctoral Candidate at UC San Francisco, 1958-59##¹

Dettner: I think I told you that at some point along the line, I went back to graduate school and got a master's. Then, after my husband died, I went over to do the bioassay job at the radiation lab. Not long after that, a professor of biochemistry, called me and said, "Why don't you come back and get your doctorate?" I had known him forever, and we had seen him and his wife socially.

So I said, "Well, I've thought about it and it's probably a good idea. But I've just gone back to set up the bioassay lab at Berkeley, and I really am fascinated with what I'm doing." And he went on, "I think you should, and I hope you choose to do it in my field," and so forth. So I thought, I really do want to continue and I want to work professionally in this area. I thought about it for a long time. It would mean taking a couple of years out of my professional life to do it, but I thought it was worth doing.

He said, "Well, you can do it. It's not going to be so taxing, and you won't have any trouble." So I thought, well, after all, why not. I didn't want to interrupt what I was doing to take a couple of years off for graduate work. In fact, I didn't feel I could afford to. But if I could do it and do my work besides, I would like to.

So I started in and everything went beautifully for about two years. And then he gave me a weird thing to investigate, which I thought was very odd. He was passionate about a slightly changed nucleotide which is seen in urine in some persons. This nucleotide was discovered by one of his students, but the professor made a great thing of it in his own work. He thought that research about it was going to be very promising, so he made arrangements for me to work on this nucleotide.

¹This section combines portions of tapes 2 [with Morris as interviewer] and 6 [interviewer, Hughes] and deletes repetitious material.

By this time, the department had moved over to San Francisco and I began to realize his interest in having me as a student was because of ties Bela had had with the medical faculty. I did what I could and had several dinner parties at which he met some of the outstanding people in the medical faculty. But none of it did him much good because they all thought he was rather silly.

Morris: He was difficult to deal with?

Dettner: Well, yes. He had distorted ideas about things. So none of it was a great success.

He had a practice of having his group of graduate students come down for coffee in his office every afternoon at four o'clock. No excuses; you couldn't miss this. And it was vile coffee, which he made personally. And he would, during these sessions, prattle on chiefly about Eisenhower who was his great hero. One would do one's best to seem receptive. At least I never argued with him.

One day, one of the boys in the group--I was the only female student he had--said to me, "Let's go get some coffee. I want to talk to you." And he said, "Our dear professor wants to get rid of you." I said, "Why?" He said, "I don't know. I think it's because he feels when you're there he can't talk arrant nonsense."

And I said, "Well, I have never said anything to make him feel challenged. Of course, he talks nonsense." He said, "Well, you ought to watch your step pretty carefully." So I just did what he suggested and things went along.

Thus I was handed a problem and the professor said, "This is going to be your thesis problem and I've arranged for the department of medicine to send patients' urine, and I want you to see if you can isolate this particular compound." I said, "I think there is only one way that one can do this and that is by ion-exchange chromatography. And he said, "I won't have that in my laboratory." So I thought, gee whiz!

You see, this is a means of putting a compound on a burette loaded with an appropriate resin, which you arrange in a column so that it will exchange in accordance with the ionic charge on the material you're studying. You prepare the resin in such a way that the thing you're looking for adheres to the resin in the column and you elute it with appropriate solvents. When you have the right ones, it comes out in certain fractions from the column. It's there and it's pure and you can identify it.

So I went about making a separation as best I could, without resorting to ion-exchange chromatography, and I got very strong suggestions that it was there, but not the pure product. But he still said, "I won't have a column operated in my laboratory." Why? God

only knows. One of the faculty people to whom I mentioned this said, "Well, why don't you set up your column in the ladies' bathroom?" [Laughter] Anyway, things went from bad to worse between us, obviously, although I took and passed my orals, did all the things one was supposed to.

Finally, he confronted me in the corridor one day and said, "I'm very distressed to hear that you've been gossiping about me in Berkeley."

I said, "What are you talking about? I haven't been in Berkeley for three years since the department of biochemistry moved over here. I haven't set foot in Berkeley. Who said this?" And he told me the name of a young woman in nutrition. I said, "If you want to be fair, the only thing you can do is get her to come over and say in my presence what I'm supposed to have said to her." "Oh, I couldn't possibly do that," said he.

I was enraged. So I stormed in to the chairman of the department and told him what had happened. I complained bitterly and I said, "I simply will not go on with this man." The chairman said, "Well, that's terrible. Why don't you go home for a couple of days and let me handle it. We'll find somebody else to supervise you, if not somebody in the department, then somebody in the medical school. Would that be all right?" I said, "That would be fine."

He called me in two days and said, "He just won't release you." I said, "Well, I'm releasing him then." I was never so mad in my life. Of course, I know perfectly well I could have made life difficult for my mentor. Many of Bela's friends who had somehow got word of my difficulties had offered assistance and I had said no to all offers. I really did not want to become a *cause celebre*, and though I appreciated their interest and concern, I preferred to fight my own battle.

Hughes: That was a personal tragedy when you were so close [to getting your doctorate].

Dettner: It was a miserable experience. Yes, I was in candidacy. But I just could not go on with that.

Morris: Did you feel that some of this was directed at you because you were a woman?

Dettner: I think so. Oh, yes--during all this *Sturm und Drang*, he brought me a reprint from a journal in which a group of investigators in the East had demonstrated the presence of this phenomenal component. I looked at it and said, "Please note how they did it. They did it by ion-exchange chromatography."

Morris: So you ended up without the final okay for your doctorate?

Dettner: Right. But I did get my master's degree, from UCSF, somewhere in here. About 1958.

Morris: What a sad tale about talent not being appreciated. It must have complicated your own professional career.

Dettner: Terribly. You know, part of what upset me was that he gave the course in biochemistry I had taken that so fascinated me as an undergraduate. His field was carbohydrates and nucleic acids; practically nothing was known about nucleic acids when I was an undergraduate. Then in later years, after Bela and I were married and working together at the medical school, my husband asked me to go over and learn the techniques of working with nucleic acids, which I was delighted to do. I spent a whole year in this man's lab in Berkeley.

I went over every single day and I worked with one of his graduate students, who was on the verge of getting his doctorate, and learned the techniques, because they're very special for dealing with nucleic acids. They weren't as special then as they became later, when it became possible to isolate DNA. But that was a long way ahead. However, I learned these things.

Later, my husband employed this graduate student after he got his degree, and they did some work together which was published, of course. Then the young man went to Stanford for a job. As far as I know, he's still there.

[Hughes: What happened to your doctoral advisor?]

Dettner: The summer before all this happened to me, he went to Europe and he recruited two boys in Poland to come and take their degrees, obviously with him. They came and he got money for them and everything was fine. But then he made the mistake of propositioning one of them who turned him down. [I'm told that] he was furious and said, "You'd better understand that you'll never get a degree in this department." So the boy went all the way to [then University of California president] Clark Kerr, who fired the professor on the spot.

Then all my friends said, "Why don't you come back and finish up?" I said, "No. Enough is enough."

Establishing the Bioassay Program at Lawrence Berkeley Lab, 1960

Dettner: In the meantime, John Lawrence had called me and I'd gone back to the Berkeley lab. He had said, "We're going to have to have a bioassay facility here at the lab." Of course, he fought it like a tiger for years, because he liked spending his money the way he wanted to. The Atomic Energy Commission said you simply can't operate without it.

Hughes: Now this was to monitor personnel at Donner?

Dettner: At the whole Rad Lab. The hill and everything.

John called me and said he'd like to talk to me. It turned out he was, at last, reluctantly about to establish a bioassay facility, and would I come and do it. I said, "I'd love to." So I did.

Hughes: What were the facilities?

Dettner: They [had been sending] everything to Los Alamos or to Livermore.

Hughes: What was your role?

Dettner: I had to organize, first of all, a schedule of the monitoring; secondly, set up all the methods used in biochemistry, all of which are detailed in my reprints.¹ I don't know if you've bothered to read these.

Hughes: I didn't read word for word, but I skimmed.

Dettner: I should hope you wouldn't.

It [our bioassay facility] was starting from scratch. There was somebody around, a young woman who once in a while, if somebody was suspicious about radiation exposure would boil up a urine and see what she could find. It was absolutely unsystematic, and the person who was performing this function was untrained. My job was a matter of starting from scratch. By the time we had been at it a while, we had what I think was a very efficient service.

Hughes: Was Oak Ridge [National Laboratory] doing this for all the AEC-supported laboratories?

Dettner: No, all the national laboratories had bioassay facilities. John Lawrence was the only one who didn't and fought it like a tiger for years. Why do we need it, [was his attitude.] Send it to Los Alamos, it can be there in hours. Very very short-sighted.

Not only that, but to do it properly all of the persons who are subject to the likelihood of contamination should be monitored frequently just to be certain they didn't get a dose unwittingly.

Hughes: So you set up that schedule as well?

¹"Bioassay of transplutonium elements," op. cit.; Anne deG. Low-Beer (Dettner). "Bioassay of plutonium." In: *Handbook of Experimental Pharmacology*, op. cit. pp. 909-928.

Dettner: Yes. It was actually setting up a service from scratch. At first the work was conducted in a most crummy little room, in a building that had nothing whatever to do with the lab, up on the [Charter] hill. The facilities were nil. So when they built the new medical building on the hill, I got a beautiful lab and an office and anything needed to function. Gradually I persuaded John I needed some staff.

Nobody in the world was as surprised as John Lawrence [at how the bioassay field had developed]. The bioassay people were meeting annually and holding their meetings at various labs. I started to go to these meetings the moment I got over there.

I said to John at some point, "It would be nice, I think, to have the meeting in Berkeley if you're willing." "Oh sure, why don't you," said he. I think he felt maybe ten people got together in a room and talked about their problems. The auditorium on the hill was jammed when we had the meeting. He came, of course, to open the meeting as I had asked him to do, and he couldn't believe what he saw. It just never occurred to him.

Hughes: That must have impressed him with the importance of the effort.

Dettner: Exactly. He was very good because, immediately when it started, I kept getting notices about annual meetings and he never demurred about my going to them. He thought I should and that it was important. That was fine, but I think he thought it was a very small and unimportant operation. Also, before I actually started to work I had the opportunity to visit all the major labs, Los Alamos, Oak Ridge, Chicago, etc.

Hughes: Where was the funding coming from?

Dettner: From the Atomic Energy Commission. That was how they could enforce [the bioassay requirement]. John liked to use the money for the things he thought were most important. He wasn't going to be bothered with this kind of stuff when he had Los Alamos and Livermore to call on. The AEC said, "No, no it won't do." But he did do it for years. As a matter of fact, it was only in 1960 that the commission became adamant.

Hughes: Was there any monitoring before that? You wore a radiation badge, didn't you? Was that true when you first went over in 1940?

Dettner: No. They didn't do anything. There was no badge, nothing. Health physicists made rounds regularly among all the labs, using counters to detect any environmental contamination.

Hughes: Did anybody take a blood count?

Dettner: No.

Hughes: When did monitoring come into practice?

Dettner: I guess while I was over in the medical school.

Hughes: You've mentioned that when you came back to set up the bioassay lab you were up on the hill. Did that mean that you had very little to do with Donner Lab?

Dettner: Right. I didn't have anything to do with it.

Hughes: So you were up on the hill and John Lawrence and the Crocker research were down below [on the Berkeley campus] and never the twain shall meet.

Dettner: I used to go down there, of course. For some things, I would go down there and use some of the [Crocker] facilities and equipment.

More Details on Radioisotope Research¹

Chemical elements that participate in physiological processes are known as metabolites. Some metabolites are incorporated in specific organs or systems, as in the affinity of the thyroid gland for iodine and of osseous tissue for calcium, while others such as sodium or phosphorus are distributed ubiquitously throughout the body. The fact that metabolites may be rendered radioactive provides the rationale for their use in biological research. Because they may be traced due to their radioactivity, they can be observed as they perform their normal functions. Function defined by rates of uptake, retention, and excretion can be determined by administering tracer amounts of appropriate radiometabolites and following their course over days or weeks. The therapeutic use of radiometabolites ensures the delivery of appropriate doses of radiation specifically to sites of pathological involvement.

My work at LBL included a number of investigations based on these principles, involving small animals and human subjects. In 1941 a study of the distribution of Sr^{89} [strontium] in human subjects was undertaken by Dr. Low-Beer and me. [Charles] Pecher had recently demonstrated that the metabolic behavior of strontium is the same as that of calcium in a wide range of animal species. The radioactive properties of calcium, however, make it less

¹Mrs. Dettner drafted the following statement in June 1995, in reply to a request from Hughes and Morris for more detail about some of her work, some of which is repeated in the succeeding segment of interview. The statement is included because it demonstrates Mrs. Dettner's determination to make scientific concepts comprehensible to the lay person.

suitable for biological investigations than Sr^{89} which emits only beta radiation with a relatively short half life of 55 days.

The study involved six human patients with various forms of cancer who were scheduled for therapy or amputation. Markedly high uptake of the isotope was found in areas where new bone was being formed, irrespective of whether the growth was normal or neoplastic (diseased or abnormal). However, it was concluded that radiostrontium could probably not serve as the primary therapeutic agent in bone tumors because doses large enough to affect the tumor would cause inadmissible damage to bone marrow.

As in all such investigations, work was divided among the participating individuals, and in all cases Dr. Lawrence, as director of the laboratory, designated the senior author of the resulting report. In this investigation, Dr. Low-Beer and I wrote the protocol and carried out the procedures followed in the study, and Dr. H. Freidell participated as a clinician who was concerned with the patients involved. This was only one of many clinical studies carried on at this time. In 1950, Dr. Low-Beer wrote an account of much of this work in a volume entitled *The Clinical Use of Radioactive Isotopes*.

Dr. Low-Beer was an ingenious and resourceful scientist, and a most stimulating person to work with. Our relationship began with his need for a partner who could compensate for his limited facility with written English and progressed to full partnership in his scientific activities, and ultimately to our marriage in 1944. Bela had previously been unmarried and I believe that he contemplated our personal relationship with some apprehension. In fact, although he was a man of volatile temperament [and there were ups and downs to the relationship], our marriage moved along happily for the most part.

His death at age 55 from myeloid leukemia mirrored the experience of many radiologists, but was ironic because of his lifelong dedication to the issue of protection of workers and the public from the hazards of exposure to radioactivity. He was appointed by President Sproul as chairman of a statewide university committee to promulgate rules for the operation of all laboratories that employ radiation in any form.

Following his stay at the Berkeley laboratory, Bela joined the faculty at the medical school in San Francisco, first as associate and then as full professor of radiology and chairman of the section of therapeutic radiology.

My return to LBL in 1960 was at the invitation of John Lawrence, for the purpose of establishing and operating a bioassay facility for monitoring the work force of the laboratory for possible contamination by radioactive substances. All national

laboratories have such a facility, but Berkeley had relied on Los Alamos and Livermore for this service. At the insistence of the Atomic Energy Commission, Berkeley was to establish a facility. The wisdom of this decision is unarguable. When an exposure occurs, nothing suffices to keep the potential contamination to a minimum but prompt detection and immediate application of available remedies, together with prolonged ongoing observation.

As a result of my experience in this area, I was invited by the editors to contribute two chapters on the subject of bioassay of plutonium and transplutonium elements to the volume *Uranium, Plutonium, and the Transplutonium Elements*.¹ Together with Dr. Howard Parker, I undertook studies of the metabolic behavior in mice of Californium and Einsteinium, both transplutonium elements. Results of those investigation were published in the *Journal of Health Physics*.

##²

Morris: If you don't mind, Sally has asked me to ask for a few more details about your work. Am I right that you headed the outpatient clinical lab at Stanford before you headed the NYA; and then, in 1939, when you left NYA, you were employed at what was then called the Berkeley Radiation Lab?

Dettner: Yes, thanks to my friend Harry Wyckoff, who had been my mentor at Stanford in the clinical lab. He had written to John Lawrence and said that he could recommend me highly.

An acquaintance of mine had been at the Radiation Lab and left because her husband got an appointment somewhere else in the country and they had to leave. That is why there was an opening. I went over to see John Lawrence and he was persuaded that I could be useful. I was persuaded that I would find it very interesting. It was a completely unstructured job. The lab itself was finding its way. Here was a cyclotron which was producing hitherto unknown materials. The challenge was to learn the potential of this remarkable machine. This of course, involved studies in physics, chemistry, and biology thereby offering opportunity to anyone with basic training in any of these fields.

At the very beginning of my employment a lot of my time was spent sending out radioactive phosphorous around the country, because it was already understood that this was an excellent means of treating chronic leukemia. Every clinic in the country was pining to get some. We also had a clinic at Donner itself. People

¹Berlin: Springer-Verlag, vol. 36, 1973.

²Tape 8, side A resumes.

coming from all kinds of distances to get treatment. One who had basic training in any of the scientific fields involved could fit into the ongoing activities.

The only use of the cyclotron for treatment of patients at that time was limited to terminal cancer patients. It was a means of learning about the effect of neutrons on living tissue, and thus a guide for the calibration of dose rates in future therapeutic applications.

The Issue of Informed Consent

Dettner: The question has arisen in latter years as to whether those people gave informed consent about what was being done to them. I doubt very much that they were asked for it. I don't know, for a fact, any of this but I think it is most unlikely.

Morris: Did you, yourself, meet with the patients or administer the treatments?

Dettner: No. I didn't have anything to do with this operation. However, as part of the total study of neutron effects, it was important to monitor patients' blood counts. I did that. In comparison with the damage to tissues, blood levels were not markedly affected by neutron treatment. Conditions of tissues at autopsy, however, indicated that neutron doses had been too high.

Morris: In the nineties informed consent is an important issue.

Dettner: Absolutely. When Doctor [Hazel] O'Leary became head of the [United States] Department of Energy [1993], I remember very well--one of the first things she concerned herself with was the use of radioactive materials experimentally and whether or not informed consent had been given for their use. I think it was most unusual that there was informed consent [in the early years].

I received a letter [some time ago] from a woman in New Mexico whose name is Wellsome. She asked if I would consent to be interviewed over the phone about a book she was writing. I wrote her and said that she could call me. She said in a very general way that she was writing a book about the early use of radioisotopes in therapy. I said, "Have you seen my husband's book?" She said, "No. I know there is such a book, but I haven't seen a copy of it." I said, "If you need it, I could send it to you on a loan basis. I wouldn't want to give it away but I could lend it to you." She said, "No. I am sure that there is one in the library here." If not, I think I know another library where I could get it."

I thought, of course, that what she was interested in was the range of experiments that are reported in this book, in many of which I took part with Bela. Rather than spend hours talking to her on the telephone, I thought she should find a copy of the book. I forget exactly what she said about plutonium but I said, "There is nothing about plutonium as an experimental therapeutic agent in my husband's book. I have neither knowledge nor experience about that subject."

And it is true. I had absolutely no knowledge that plutonium experiments were being conducted, although many persons whom I knew were engaged in them.

The next thing she sent me was a copy of an article she had written for the *Albuquerque Tribune* in which she wrote about the injection with plutonium of a young man who was scheduled for leg amputation. Plutonium had been injected prior to amputation to determine uptake, distribution, and excretion. The only medical signature that she quoted was my husband's.

I don't remember when she wrote the article, but it was some time ago. The only medical name that she used was Bela's. I was simply appalled. I knew vaguely that a few people were doing some work with plutonium but I certainly didn't know that Bela was involved. I knew it much later, because Joe Hamilton, who was the chief person involved in this, himself developed leukemia and died.

I knew that he and various other people were using plutonium on patients on an experimental basis. That was absolutely all I did know about it. It turns out that not only Bela but Doctor Stone, who was chairman of the department of radiology in San Francisco--just about everybody was in on this. They certainly kept it quiet.

##

Dettner: I was enormously surprised to learn my husband's name was mentioned in connection with it because I had no idea that he was involved in any way. I said, "If this is what your book is about, I can't help you in the slightest. I would be at great pains to distance myself from any knowledge of this because I don't have it." She said, "Actually this is only a small part of the book I am writing, but it is an important part." I was at pains to make it clear that I was not a party to it. I didn't want to be identified with it and I would be very angry if I was.

Morris: There are references to plutonium in Doctor Low-Beer's book.

Dettner: Certainly, because there is a whole section on physics. Of course, you have to talk about plutonium. But there is nothing in the book about the use of plutonium on human beings, absolutely not. Animal work, sure. That is, of course, what it should be kept at.

I think there was some statement [in Wellcome's article] to the effect that this boy who was given plutonium in the leg was told something about its nature, but I would doubt that he had full understanding of the possible consequences.

Morris: He was somebody who was being treated thirty years ago?

Dettner: Yes, thirty years ago--he was about to have a leg amputated. Apparently he had some kind of a tumor.

Morris: It is very odd that a daily paper in New Mexico would run a story about a medical case thirty years ago.

Dettner: I don't think this is a terribly recent article. I am not sure exactly. I don't think it is odd, because I think Mrs. O'Leary has stirred up enough interest in the plutonium work so that [people are] anxious to learn more about it and publish about it if they can get any facts.

I thought, Of all things, why she had to use Bela's name as the only medical name in this whole article! On something else she wrote, before the plutonium article, she got a Pulitzer, so she has some standing as a journalist, you see.

Morris: The rumor that has continued is that the Atomic Energy Commission became concerned about the use on human subjects, but that the people in the labs were not all that interested in--

Dettner: They were not concerned enough to issue any orders. They may have issued suggestions. These people didn't violate any orders.

Morris: Were there orders that did come down later on when you were--

Dettner: Not when I was there. The people who were involved at the time have certainly kept it under their hats. There was nothing about Bela's work, I thought, that I didn't know, but I did not know one, single word about this. Doctor Stone apparently was involved also. They all were. They talked about it in whispers apparently to each other.

Morris: You could be there in the lab working forty hours a week and not hear anything about it?

Dettner: I didn't know anything about it. Some of it was probably done at the hospital out here [UCSF], while I was there all the time as a research fellow in radiology. This was after I was married to Bela.

Morris: Were you going back and forth between the lab at Berkeley and the medical school at that point?

Dettner: No, I wasn't going to Berkeley at all. I was actually working with Bela, largely on collecting his work and getting it ready for publication. I wrote the whole of this book except for the physics, which I couldn't have done.

Morris: Was he dictating to you?

Dettner: No. He liked to do the research, and he liked to get the result. Of all things, he wanted to see a book with his name on it.

Morris: He hadn't published a book in Europe during all of his research?

Dettner: No. Dozens of papers. That is why I am the chief name on the strontium paper. John Lawrence was very fond of Bela and he was very good to him. He was also very fond of me. When we did the strontium work, I took a tremendous amount of responsibility. I wrote the protocol for the experiments. I carried out the experiments. I evaluated the results of the experiments. But Bela always wanted the papers to be his.

John finally said, "Anne hasn't had a paper out of all this material. It is time she did."

Strontium Research

Morris: What led you and Bela to become interested in the strontium?

Dettner: The strontium was just one of many things. We were interested in knowing the biological effect of all these elements. The natural metabolic behavior of these chemicals could be used therapeutically if they contained a radioactive component. That is the whole basis of what we were doing. Of course, all kinds of things were being tried--largely on animals, but sometimes on human beings where that seemed to afford the best way to acquire knowledge. That is the whole basis of such research. To use natural metabolites with radiation attached to them, thereby delivering therapy specifically to an area, is the whole thing in a nutshell.

Strontium was considered very useful because it is an analog of calcium. It has the same biological affinity. You mentioned Pecher's work in your letter. Pecher had done a great deal to establish the fact that strontium does actually behave--metabolically--exactly as calcium does. His work was not [with radioactivity, at first]. The beginning was--you give a person a spoonful of strontium and it would do, for his bones, exactly what a spoonful of calcium would do. But strontium was favorable from the point of view of its radiological properties that could be introduced in it, which is also a factor. It is a pure beta

emitter. Its half-life is not very long. It could be used quite safely in reasonable amounts to deliver radiation to appropriate areas of the body.

Morris: It would go to the area that needed it rather than just generally--

Dettner: Since it is a bone-seeker, you would use it in a case of an osteogenic tumor. Because it is going to go to the bone, the tumor will be bathed in beta radiation.

Morris: Wasn't there a big flap in the fifties about radioactive strontium turning up in milk supplies and therefore threatening the youth of our nation?

Dettner: Yes. I don't think that it was anything very extensive.

Pecher demonstrated that strontium was a bone-seeker, but you could expect it to be so because of its position in the periodic table. You can predict what elements are going to behave similarly in living tissue.

Morris: It is a basic science issue?

Dettner: Yes. The whole method is simply to be able to attach some radiation to an element that is normally deposited in a certain part of the body and thereby deliver therapeutic radiation specifically to that area. The analogy is radioactive iodine for the thyroid. It doesn't go anywhere else.

Morris: Did your strontium paper establish that this was going to be a useful technique to use?

Dettner: Pecher established that the metabolic behavior of strontium is exactly the same as the metabolic behavior of calcium. This was just one demonstration of how it could be used in a situation of osteogenic carcinoma. Just one of many illustrations of how it could be used. There was nothing conclusive or remarkable about it at all.

Morris: Were there other parts of your research as you went on through the years that did break new ground? That you were really especially pleased to be involved in?

Dettner: In the sense that such methods of delivering radiation had never been used before--it was all breaking new ground. The interest was to explore the therapeutic effect of as many of these elements as one could. There are a number of other elements discussed in this book other than strontium. Radiophosphorus, of course, that we talked about earlier. Phosphorous is useful in leukemia because it is a ubiquitous metabolite. Therefore it is taken up all over the body, including bone marrow.

Morris: Was it well received?

Dettner: Very. It was--[reading] "animal experiments showed high selective concentration of radio arsenic in liver, kidney, spleen, and lung. Uptake by tumor tissue was relatively low, but the distribution pattern was altered by the presence of transplanted tumors in some of the animals." Apart from the possible therapeutic effect, the use of these elements was useful in determining the residence time in the body. You could measure the output through excreta without having to sacrifice the animal.

You could learn a great deal about the behavior of these chemicals, actually, because they had a radioactive tag which enabled one to follow them at every step, wherever they went. That is the whole purpose of such investigation.

More on Donner Lab

Dettner: [As I mentioned earlier], when I went back to the radiation lab after Bela died, it was to establish a bioassay facility. Berkeley had none, which was shocking.

Not very long after I went back, there was a case that had come to litigation. The university attorney came to find out if I would act as a witness. I said, "Tell me about it." It turned out that an employee of the lab years ago had been contaminated with a radioactive material through inhalation.

A urine sample was taken within a very short time, and was sent to Los Alamos for determination of the presence of radioactivity and it came back negative. This ended the examination. Another sample was never taken, and subsequently the man left the lab and went somewhere else to work. Some years later he developed leukemia and died. His family was suing the university. The university attorney came to find out if I would be a witness in the case.

I said, "I don't know what you would like me to testify, but I can't. We don't have any data." He said, "They did get a report from Los Alamos." I said, "Look, the man had a respiratory exposure. It takes hours before anything appears in the urine because it has to diffuse out from the lungs, and enter the blood stream. A sample taken immediately after the exposure tells you absolutely nothing. All that I could say if I took the witness stand is that we don't have any data." He was bitterly disappointed. One of my colleagues in the lab didn't mind at all. He went and testified. I don't know what he said.

Morris: Was there anything special going on that made the AEC become more insistent about having a bioassay facility at Berkeley as well as Los Alamos?

Dettner: No. But it had become a policy of the AEC that no lab under their jurisdiction could operate without a bioassay faculty.

Morris: But had there been an increase in employee--

Dettner: No. It was a matter of policy that you could not operate an institution like that and not have a place where you could immediately determine what had happened and continue to make the observations as long as necessary.

Morris: I was thinking that Glenn Seaborg had been associate director of the lab before he became head of the AEC.¹ He must have known quite a lot about what was going on. I wonder if he would have insisted on the bioassay facility?

Dettner: I think so too. John Lawrence, after all, was Ernest's brother and he could be very persuasive. He would say that we don't really need it. If we have any trouble we can always send samples to Livermore or Los Alamos. Fortunately the Atomic Energy Commission said, "This won't do."

Morris: Can you put a date on that, when you went back?

Dettner: Yes. I went back in '60. I wasn't back two weeks before this attorney came to talk to me.

Morris: Looking back on it, would you say that an unexpectedly large number of people working at the lab did eventually contract leukemia?

Dettner: No. I don't think so. I think people who were just rampantly careless, like Joe Hamilton, got it.

¹Seaborg, who had directed plutonium research for the Manhattan Project during World War II, was also associate director of the Lawrence Radiation Laboratory, a position he retained during his years as chancellor of the Berkeley campus until 1961, when he became director of the AEC. *University of California, 1868-1968*, Verne Stadtman, New York: McGraw Hill Book Co., 1970, 383.

Women in Science¹

Hughes: Do you have any comment to make about what it was like being a woman in science in those days?

Dettner: I thought it was fine. People have always asked me that question. But I never felt anything but perfectly comfortable.

Hughes: You never felt that you were being held back in any way because of your gender?

Dettner: Not at all.

Morris: It sounds as if they didn't take women in the sciences very seriously.

Dettner: That is true too.

Morris: Did you feel that got better over the years that you were there?

Dettner: Yes, very much.

Morris: Were there enough women around, either at the lab or back and forth between the lab and the medical school, that the women could caucus together and speak up for their rights?

Dettner: No. There were only really one or two people. There were almost no women at all at Livermore.

I was enormously impressed a year or so ago when they asked me to come over and give a talk at Livermore.² It was chiefly for the women in the various fields. I was simply amazed, not only at the number, but at the quality and the kind of work they were doing. They were doing really sensational things.

1994 Visit to Livermore Lab

Morris: Did you have much contact with the Livermore people when you were there?

¹This section combines Mrs. Dettner's responses to similar questions asked by Hughes [Tape 6] and Morris [Tape 10].

²In 1974. See article in supporting documents from Livermore Lab newsletter about Mrs. Dettner's visit.

Dettner: None.

Morris: It was the understanding that they were focused primarily on weapons development?

Dettner: Right. It was operated by the university, but no--in the biological field we had no contact at all. Now it would be a very different matter.

Morris: Now it seems to be that they have a parallel organization out there, part run by the department of energy and part run by the university.

Dettner: That is right. I was very much interested because the day they asked me to come and do this talk, they sent a car for me, to get there in the morning. I spent several hours being taken on a tour and seeing in detail what was going in these various laboratories. It was fascinating. One of the things that has happened has been the ability to isolate DNA, and therefore to study it, which was not possible in my day.

Morris: Were there the beginnings of DNA research in your time?

Dettner: Just the vaguest beginnings. Now, by taking a sample of chromosomes and examining them in certain ways they can tell exactly what radiation effect has been on living tissue in the most fundamental way. We had no way of doing that at all. It is absolutely sensational.

Morris: I heard a very brief mention on the radio yesterday about the current research indicating that DNA molecules, themselves, can adapt over time.

Dettner: It is supposed to, yes. I don't think anything biological is written in concrete. It can always change and adapt. Adaptation is the great gift.

These things are just fabulous to see. They take wonderful care at Livermore of the health of the staff. They are really vigilant to avoid any damage, as they should be. Very, very good health service which involves everybody. I was tremendously impressed with the whole thing. I am sure what I was able to tell them [about my years at the lab] sounded primitive as possible.

Morris: I would imagine that they were pleased to meet somebody who had been there before--

Dettner: They seemed to be very interested, yes. They were an excellent audience.

The Berkeley Lab and Campus Administration

Morris: In the beginning, it seems as if the lab was very much autonomous because it was working in new territories.

Dettner: Yes.

Morris: By the time you left in the 1970s, did you feel as if the lab was more a part of the university community?

Dettner: No. I didn't feel so at all. The hill was something to itself, totally. Donner, which was all biological, I thought also was a thing completely unto itself. It had virtually no contact with the department of biochemistry or anything else. By the time I returned to the Berkeley lab, the department of biochemistry had moved over to the medical school. That contact wouldn't have been maintained anyway.

Morris: I am not clear about the relationship organizationally between the Donner Lab and the Lawrence Berkeley Lab.

Dettner: Donner is part of the Radiation Lab, [which is located on the hill above the campus]. Donner is near the Hearst Mining Building. It was built on the bones of the old Radiation Lab and Crocker Lab, the building where I first worked.¹ It is the medical and biological part. Whereas the hill is completely physics.

Morris: You were subject to whatever their funding and federal government regulations--

Dettner: Whatever funding the Berkeley Radiation Lab got, that covered the operations of the cyclotron and the physicists and so on, plus the Donner Lab operation. It was funded outside of the university. The university never would have insisted that the Berkeley lab have a bioassay facility. But the Atomic Energy Commission did.

Morris: Was Glenn Seaborg a presence at all while he was chancellor?

Dettner: Yes, they all were. [E.O.] McMillan was head of the physics end of the Berkeley lab, John Lawrence of the medical end, Seaborg, of course was around. They all were.

¹According to the university Centennial History, the original radiation laboratory on the Berkeley campus was operated in the Civil Engineering Testing Lab from 1931-1959, at which time the building was demolished. In 1939, the William H. Crocker Laboratory was completed to house the 60-inch cyclotron. In 1941, funds were donated by the Donner family to build another laboratory to house the biology and medicine program of the Lawrence Radiation Laboratory established the same year.

- Morris: Did it help, or increase the eminence of the lab to have Seaborg be head of the national--
- Dettner: I think, very likely, yes. The Berkeley lab was bursting with celebrities, it had Ernest Lawrence himself, and McMillan, Seaborg, more people than that, everybody.
- Morris: Melvin Calvin--
- Dettner: Calvin was in the university in chemistry.
- Morris: Right, but again, I wondered how much contact there was with people in other departments.
- Dettner: Departments of the university? Not as much as you might expect. After all, this whole operation was tied in to the Atomic Energy Commission, not to the regents and government of the university.
- Morris: Yet the university is sort of an umbrella.
- Dettner: Very much so.
- Morris: Were the questions raised that now turn up at contract time, that the university should not be providing the administrative support for military research?
- Dettner: I don't know. Most of the national labs are not directly university-connected.
- Morris: They are free standing?
- Dettner: Take Oak Ridge, for instance. It had no university connection. Argonne in Chicago may have a loose connection with the University of Chicago, but not very close. Over the years they have all been pretty separate from universities which may house them and give them certain facilities. They are really very independent.
- Morris: Pretty much all allow their staff people independence in what they are doing and pursuing?
- Dettner: Yes.

On Retirement; Consultant to the Lab¹

Hughes: Do you have anything more that you would like to say?

Dettner: I think I've told you everything I know, at least about that period. I was just delighted to go back to the Rad Lab in 1960. [Then] when I approached retirement, I thought that I couldn't survive. Nothing more dreadful could happen than that I can't go there.

But Doctor Jim Born [assistant director of Donner Lab] came around about a month or so before I was to retire, which was the end of the fiscal year of 1972 and said, "We were wondering if you would be at all interested in taking a consultantship." Oh!

Hughes: Best thing you'd ever heard.

Dettner: Absolutely. So I did. The young man who followed me had just finished his doctorate in radiochemistry, but he really didn't know anything about the lab or how it ran. Ralph Christensen. Without wanting to get underfoot with him, I was delighted to be more or less on call.

I used to go over about three times a week. If he had anything he wanted to talk to me about, [we'd talk]. Otherwise I had [use of] all the facilities; I could do anything I wanted, and I did a couple of little studies.

Hughes: What on?

Dettner: I did one on carbon-14 because I felt that the retention time as quoted in the literature was wrong. And it was. It was considerably longer than they said.

Hughes: This was for animal research?

Dettner: Yes, that was animals. The other thing was the environment. The environment around the lab was interesting--natural radionuclides.

Hughes: Natural. I thought maybe people in the old days had dumped them.

Dettner: No, I think there was none of that. And I did some tissue studies on animals that had died, like deer. They had not a high degree, but discernible degrees of contamination with naturally occurring radionuclides. It was very interesting. I can't tell you how steeped I was in what I was doing. I just loved it.

¹This section combines questions from Hughes [Tape 6, side A] and Morris [Tape 11, side A] and deletes repetitious material.

Morris: How long did you stay on as a consultant?

Dettner: Only a year or so.

Morris: What finally reconciled you to the rigors of retirement?

Dettner: I met George again, and we got married after much too long a delay.

On Doctor George Dettner¹

Dettner: The ensuing years were by far the happiest of my life--happy in a manner that is possible only between kindred spirits. When I realized that my early feelings for George had been fully reciprocated, I asked why his behavior in those days had been so glacial. He explained the promise my mother had exacted: if he wished to continue to spend time with me, it must be as a disinterested friend. Any display of deeper feelings was absolutely taboo. (It would be difficult to exaggerate the bitterness with which I received this news.) At the same time, George was being constrained by his father from making serious advances to any "young lady" until he had ten thousand dollars in the bank. As this seemed a remote prospect at the time, he had little choice but to conform to my mother's demands.

Without consideration of my mother's development, her manipulation of my life would seem unnecessary and unkind. In 1905, the year I was born, it was usual for young women to move from the authority of their parents to the authority of a husband. The role assigned to them--social competence, affectionate parenting, generosity to the less fortunate--provided no participation in the real life of the community, or indeed, the pursuit of any intellectual interest. As we know, many early feminists endured obloquy and hardship in pursuit of their modest demands for the right to express their views through the ballot, and later to attain recognition of their political contribution to the life of the community. In the view of such women, no personal sacrifice was too great if it contributed to the goal of full participation. As my mother shared these concerns in their entirety, it is not remarkable that she was stimulated by the intellectual attainments of Doctor Lillian Martin, and gratified by my increasing role in the life of the community. I think she continued to believe that marriage was inhibitory to women's progress and should therefore be entered into

¹After completing her review of this oral history, Mrs. Dettner wrote the following addendum to summarize thoughts on the meaning of her life, the result of reflecting on and discussing her varied career for the narrative.

only after more than due consideration and, even then, with no assurance of fulfillment.

I can only say that my life has been richer in experience, and in friendship, than I can say. I am grateful for the opportunities I have had in professional and in community activity, and for all the experiences from which I have learned what is important in life.

X VARIETIES OF PUBLIC SERVICE AND VOLUNTEER COMMUNITY WORK##¹

War Manpower Commission, 1944

Morris: Maybe this would be the time to pick up on the War Manpower Commission.

Dettner: That basically grew out of the League of Women Voters. We talked about how that led to my work with the state relief commission and then the NYA during the Depression, from 1935-1939. I learned an awful lot from all that. I learned not only about what the federal programs were doing but I learned a great deal about the antiquated way that social work was being administered in San Francisco.

The War Manpower Commission was much later, at the end of the war. I was assigned to the regional office, which was in San Francisco, as assistant to the regional director. What I was supposed to do was get more women into the work force. The foremen who were running the jobs and would have been their bosses didn't want them. Most of my time I spent arguing with foremen. It was a very unsatisfying job. I was drafted into it and I didn't want to do it.

Morris: You had to take time off from your work with Dr. Low-Beer? This was your job for a year?

Dettner: Yes. That is exactly the point. I talked to my dear friend, Richard Neustadt, who was the regional head of Social Security. I said, "Richard, I don't want to do that." He said, "Look, Anne, in wartime you don't choose your job. You go over there and tell them you will be glad to take it."

¹Tape 9A resumes.

Morris: The mythology is that one of the wonderful things about World War II is that Rosie the Riveter got to help in the war effort and all these women became a part of the work force.

Dettner: I know, but most of these nasty foremen didn't welcome it.

Morris: It must have been a great cultural shock.

Dettner: It was. More than they could face.

Morris: Both directions, for the foremen and for the women?

Dettner: It got to be an awful job because they wanted to hang on to their budget. If they were to hang on to their budget, they couldn't lose any staff.

Morris: The commission?

Dettner: Yes, the War Manpower Commission. So when the last woman I was ever going to get into a job was already working and I could very well have left--I couldn't because it would have cut their budget. I sat there making projections of employment levels based on very inadequate information.

Morris: How did the commission go about recruiting women to take these jobs when they did exist?

Dettner: They did it by advertising and going around to different communities. I didn't have to do much of that. I did travel a good deal, as the regional office covered five western states. I would go to the head group in whatever the community was and give them a pep talk, see what they were doing, and how many more women could be employed. It was largely left to the foreman on the job, actually.

Morris: To do the actual hiring.

Dettner: Yes. They certainly had little enthusiasm for the assignment.

Morris: It was a matter of women just turning up at the factory gate and asking for a job?

Dettner: That's right, largely. We didn't have any way of having a reserve of women and saying, "We will dispense fifty women to you Tuesday morning." Nothing like that.

Morris: I remember talking to Bernice May about this years ago, although she may have worked in a different branch.¹ I remember her thinking that the organization did a good job of predicting how many people were going to be needed to--

Dettner: That was part of our job, of course.

The man who was chosen to be regional director was not very adequate. He came from one of the Hollywood studios. He had very little idea of how to run a public operation with a great deal of diversity.

Morris: Did he go back to the motion picture industry?

Dettner: I guess so. He was furious at me once because we needed a new typist or some other office worker--a black girl was well-qualified and I took her on. She was sitting not very far from the entrance to his own sanctimonious presence. He nearly died.

Morris: He wasn't ready to have an African-American woman in his own office?

Dettner: Absolutely not. And, "If you had to get her, you didn't have to set her right in front of my office. What is the regional commission going to say?" I said, "They should congratulate you."

Morris: Was there much of an effort made to bring African-Americans into defense-plant jobs?

Dettner: Not enough effort. Not nearly enough effort.

I discovered one day that the regional director was entertaining in his office a woman whom I had known since early childhood who was an active Communist, not avowed but generally recognized as such. I didn't tell him, of course; didn't think it was my business to blacken her reputation. After all, he thought it was so nice that she was interested. Well, the fact that this woman was from a family that my family knew well caused me a very sticky time with the government.

It was when the Manhattan Project wanted Bela to be a medical consultant. The FBI did a security check on both of us and said that Bela was okay, but his wife was questionable. It turned out that it was because of my acquaintance with this

¹Bernice Hubbard May, *A Native Daughter's Leadership in Public Affairs*, Berkeley: Regional Oral History Office, 1976, 2 vols.

woman. Apparently the things she dredged up about the commission she passed on to the Soviet embassy, and they all turned up in my investigation. And they said every cent she got she gave to the Communist party.

Bela was terribly upset and went to see my mother, who was very indignant. "Stupid people," she said. "How could they believe that any information that unhappy girl collected would be important!"

The FBI investigator was extremely understanding and ultimately I was totally cleared, but I went through a very nasty period trying to justify my existence. It was a very unpleasant period for all of us.

Morris: What an experience! In the 1950s, would Bela have been asked to sign the university anti-Communist loyalty oath?

Dettner: That came up while we were on sabbatical. The oath was on his desk when we returned, and he just signed it. Afterwards, he was very distressed that he had done so. Before long, he was just wretched with leukemia and not thinking about much else but getting out of town. That's why we built the house in Larkspur; one of the few things he continued to enjoy was the garden there.

I thought I might have trouble over the oath when I went back to Berkeley in 1960, but I didn't.

Morris: [Going back to] your Manpower Commission work, did you do a lot of work with the shipyards?

Dettner: Yes.

Morris: Was it the shipyards themselves or would it be your operation that was reported to be sending trains going back to the south and bringing trainloads of black people in?

Dettner: No, we didn't do that. We processed them after they got here. We didn't do any recruiting from other parts of the country.

Morris: It sounds like there was a duplicate effort going on.

Dettner: Yes, it was. It was a very poorly planned operation.

As I look back on the War Manpower Commission experience, I believe that one of the important contributions of the program was the impetus it gave to the day-care center movement. The fact that a whole system of well-run centers for the care of young children, has become a recognized element of urban life,

has made it possible for scores of women to enter the work force knowing that their doing so does not endanger the development of their children.

League of Women Voters Energy Committee, ca. 1972##

Morris: Did you stay in touch with your league friends or with what the league was doing?

Dettner: Somewhat, but I was not really active in the league until I went back as chairman of the energy committee. I didn't want to go on with a very active role. Although I did continue to go to the neighborhood groups.

Morris: The league unit meetings.

Dettner: The one which I would normally have gone to anyway was at the house of a friend of mine out on Presidio Avenue. I used to go there regularly and take part in the discussion and keep up with their interests until I got too much involved in other things. I haven't gone to a unit meeting in ages.

Morris: How did you find the time to chair a league committee?

Dettner: Here I was steeped in the subject. It was when the whole community was concerned about alternative sources of energy, and the subject was of major concern in the Lawrence Berkeley Laboratory.

Morris: This would have been in the 1970s?

Dettner: Yes. I retired in 1972, when I was sixty-seven. Just about that time, there was much concern about energy conservation, and development of alternative sources of energy such as solar and wind energy.

The San Francisco league asked me if I would give them some information. I think they thought that this was something that they ought to know a little about, but that it probably wouldn't engage their interest to any great extent. They found that it did. They were quite enthusiastic.

Then they asked if I would really get down to business and give them as much information as I could. I said I would be very happy to. They said I would have to come back on the board to do it. I said that I would have no objection. They said that no

president had ever come back on the board. I said, "Why don't we start a new custom."

Morris: Did you find the board had changed since the 1930s?

Dettner: It was fine. It was totally different. Much better informed people, of course, much more active people. Altogether very interested. In purely physical ways it was different too because so many women were working. Meetings couldn't be all afternoon or all morning as they used to be. One had to accommodate to the fact that women could maybe have late afternoon or evening meetings.

Morris: They got things done more expeditiously?

Dettner: Much.

Morris: How did you happen to be in the middle of things like solar energy and wind energy?

Dettner: It was all the whole talk at the lab. Everybody in any area of science was concerned with alternate sources of energy.

Morris: In terms of running the linear accelerator and things like that?

Dettner: Exactly, in terms of everything.

Morris: That seems like a very practical concern from scientists.

Dettner: Of course. The league wasn't the least bit interested in the biological work that I was doing. But they were interested in and they wanted to learn more about sources of energy as they might affect life generally. You couldn't be in Berkeley without knowing something about that.

Morris: Because there was that much contact between the people--

Dettner: It was the currency of conversation, all these energy needs.

Morris: Are there some topics we've missed?

Dettner: We have missed certain activities in San Francisco, some agency boards I served on and the Ford Foundation Committee on Aging.

Neighborhood Centers Unification Plan, 1971¹

Morris: [Even with] Bela as ill as he was, you still took the time to do some community work and go on the Community Chest board.

Dettner: A little, but not too much.

Morris: And this is when Larry Kramer comes into the story and becomes one of your friends.

Dettner: Oh, quite so. As I am sure you know, there is nothing passive about Larry. He is one of the most dynamic persons I have ever known and I regard his friendship as one of the great blessings of my life.

Morris: About 1952, you went on the board of the Community Chest.

Dettner: To fill an unexpired term, Frank Sloss was president of the Chest at that time,² and Frank and I, of course, were lifelong friends. Well, in the course of that, I became chairman of a--what was it called? A committee, actually, that was concerned with settlement houses and neighborhood centers. These in San Francisco had long traditions of serving the people in their neighborhoods, and they had their own programs, and very distinctive programs, because they responded to the needs and the wishes of their clients. All of them were basically an outgrowth of Hull House in Chicago.

I became chairman, succeeding Jack Voorsanger who had given a great deal of time and thought to the program but had been unable to carry on because of a fatal illness.

Under Jack's leadership the Golden Gate Neighborhood Centers Association was formed, consisting of representatives, both professional and lay, of the agencies, and a few members--interested and prominent persons from the community at large. It was the purpose of the association to give the combined centers a stronger voice, and perhaps a more consistent method of defining goals and methods.

I wasn't in office very long when the National Federation of Settlements headquarters issued [1965] what amounted to an order to bring all neighborhood centers together in a pattern, which

¹Tape 10, side B resumes.

²1954-1955.

was largely a matter of controlling their financing and their methods of operation. This was simply issued as an order. Our whole GGNCA board felt that it would not be easy or even possible to persuade the centers to go along with any centralized plan as each center had its own traditions; and all were profoundly jealous of their autonomy.

Morris: This is like the Telegraph Hill Neighborhood Association?

Dettner: Yes. That is one of the original group of settlements in San Francisco.

Morris: Which went back into the 1800s?

Dettner: Yes, exactly. It was a response to the needs of the largely Italian community which lived in the area of San Francisco known as North Beach. It was sponsored by two very generous and farsighted women, Alice Griffith and Elizabeth Ashe, who gave most generously of both time and money, to serve the community.

It was out of that [spirit] that the settlement houses of San Francisco developed, each in its own neighborhood and with its own clientele and traditions. I think everybody on our board realized that it would be a very difficult transition for them to be part of a standardized group. So it was decided that we would ask the Community Chest to engage Kramer and Miller [later Kramer, Blum and Associates] to do a study that would give us a pattern, which we felt could be made acceptable to the settlement houses, the neighborhood centers, and still carry out the wishes of the United Way.

Kramer and Miller did an excellent study and developed a plan which seemed as though it ought to be acceptable.¹ The centers had terrible difficulty with it, and one or two were extremely hostile to the idea. Kramer talked with a lot of people from the settlement houses. They made a very extensive investigation of how things were being run and the philosophy of these various centers and they did the best possible job that could have been done as a means of implementing the United Way requirements. Of course, the United Way was especially interested in the financial aspects of a merger.

Morris: They were suggesting one organization for San Francisco with branches--

¹"Report to the Board of Directors of Golden Gate Neighborhood Centers Association" on "Rationale for the Development of a City-wide Organization." October, 1971. See Dettner papers in The Bancroft Library.

Dettner: Right, right--which would all operate as branches under the same rules and the same philosophy. The key element in the plan was the director who would be responsible to the GGNCA, and who would have authority over the individual center directors.

I think most of us recognized that, for the agencies, this was going to be a very difficult thing to accept. The Booker T. Washington Center, which was black, declared from the outset that it would never accept such an arrangement. The Community Chest then decreed that any agency which refused to accept the plan would not be funded. And of course, anybody should have known from the outset that nobody could refuse to fund a black organization.

Morris: Well, its own board would have been up in arms.

Dettner: Of course. Just utterly ridiculous. Kramer and Blum did an excellent study of the whole program and proposed a plan which, if any plan could have been effective, would have been. Some of the agencies took it on with more or less willingness, but mostly they did it very reluctantly, and some absolutely refused. The board of the GGNCA was composed of representatives of each of the agencies, and a few members at large from the wider community.

Morris: Ah. I was wondering who was on your board.

Dettner: That was it. The agency representatives were very loose about what they reported from their agencies. For example, in one case, it was reported to the GGNCA that an agency had accepted the plan. When it came to it, it turned out it hadn't even considered adoption. The person who was representing them on the GGNCA apparently thought it was easier to say that, yes, they'd go along and he undoubtedly thought that they would, with a little more persuasion.

Morris: The plan just was instituted by fiat?

Dettner: Right. And the Booker T. Washington Center still maintained that it would not go along, and, of course, it was funded. I mean, what could you expect?

Morris: Do you remember the names of some of the people who were on your committee?

Dettner: Oh, let's see. Thorne Corse, who was an executive of the Bank of America; Robert Stevens, Potrero Hill Center--he was an at-large director; Jane Roos, Community Music School; Joseph Armin, Mission Center.

Morris: Was that when Florette Pomeroy was on the staff?

Dettner: No, it was after Florette's term as director of the Chest. I can't remember the name of the man from Telegraph Hill, who told us that his board had accepted the plan and it hadn't at all.

Morris: Did you heave a great sigh of relief when your term was up?

Dettner: Oh, heavens yes. I just hated every minute of it. It was horrible. But out of that, I became great friends with Larry Kramer and his wife.

As I noted earlier, the key provision of the Kramer-Blum plan was the director. That person would have needed infinite tact and great maturity to have worked successfully with the individual centers. We had a candidate who had these qualities, but who, because of a serious health problem in his own family, could not accept the salary which UBAC [United Bay Area Crusade, successor to the Community Chest and predecessor of United Way] had established for the director. As UBAC would not consider an increase, we chose the most successful of the individual center directors. This was undoubtedly a mistake and after a year of operation under the plan, the distribution committee of UBAC abandoned the plan.

Ford Foundation Sponsors Committee on Aging, 1964##

Morris: Did you get involved in any of the Community Chest fundraising activities?

Dettner: No, never. I was never any good as a fundraiser, and I avoided any such obligations as much as I could. No, I was about to say something else about that--oh, yes. It was not very much after that that I was asked to be chairman of the committee that was established through the support of the Ford Foundation on questions of aging. I want to tell you that I have been trying to find a copy of the recommendations that the committee made, but I haven't been able to run one down.

I don't remember the specifics at all any more. All I can say is that it was a very good committee, and we did make recommendations of a very substantial nature, and it did result in the establishment of the Commission on Aging in the city. So I considered that assignment as a success from my own point of view.

Morris: Was this committee an offshoot of the Community Chest, or the United Way it may have been by then?

Dettner: Well, yes. The Ford Foundation supported this within the United Way.

Morris: So that they may have applied to the Ford Foundation for funding for this?

Dettner: That I can't say, I don't know. I would like very much to remember what specifically were the main recommendations. I'm sure that one of them had to do with health, because I know that it was agreed that one of the, if not the major problem of older people is health and must have consideration.

Morris: And this would have been in the middle fifties?

Dettner: No, it was later, it was in the middle sixties.

Morris: So it would be coming along about the same time that Medicare was--Medicare was passed in 1964.

Dettner: Oh, yes.

Morris: And there was a lot of community consensus building paving the way for that.

Dettner: That's right, yes. Now, I remember very well that there was a mayoral campaign going on at the time, and a very nasty little man, who had originally been on my Ford Foundation committee, had been asked to get off because he had done some things that were really very unscrupulous.

Morris: Oh, really? Oh, my.

Dettner: Yes. We did get rid of him from the committee, but at the time that the report was just being finished and ready to be publicized, he called me because he was working for one of the candidates for mayor and he wanted me to slip him an advance copy. Of course, I refused absolutely. That was the campaign in which Harold Dobbs was running against Jack Shelley.

Morris: That's 1964.

Dettner: Well, that's when it was, then. And this man wanted to give Dobbs an advance copy, which naturally I refused to give him.

Morris: That must have been a strange campaign. I understand there were any number of lifelong Republicans who were supporting Shelley in that campaign.

Dettner: I guess there must have been.

Morris: So I guess Harold Dobbs must have offended a number of people, even though he'd been a supervisor for so long.

Dettner: I guess so. Well, this man who was working for him certainly offended people. He certainly offended me. Imagine thinking that a person who had worked on a committee would give out special information to a political candidate.

Morris: Oh, dear. Yes. Well, this sounds as if it was part of the beginning of general awareness of the needs of older people.

Dettner: Yes, I think so, and I don't know how long after the issuance of our report that the city established a Commission on Aging.

Morris: Do you remember who recruited you to go on that committee on aging?

Dettner: I believe it was Florette Pomeroy.

Morris: But you didn't have to go out and do the legwork to develop the information?

Dettner: No. Martin Paley was the staff person for the committee. I remember Martin came to see me one day, and he seemed very restless. Finally he broke out with the truth, which was that his wife was in the hospital about to deliver a baby.

Morris: Oh, poor man!

Dettner: And he thought he should get over there. [laughing] And I said, "I certainly think you should."

Morris: And he then went onto a health facilities planning commission before he became director of the San Francisco Foundation. So that reinforces your thought that one of the important parts of the Commission on Aging was health care.

Dettner: Yes. Oh, absolutely. It would have to be. Because I think everybody agreed that health was the major problem of older people.

Morris: Aside from being concerned about his wife's impending delivery, what did you think of--how did you find Martin to work with?

Dettner: Oh, he was very pleasant always to work with. But I just don't think that he was ready for the directorship of the San Francisco Foundation. I certainly think they picked a gem when they got Bob Fisher.

Recapitulation

Morris: Looking back on your very busy career, you've managed to do a lot of community work in addition to your scientific career.

Dettner: Well, I attribute it to the fact that I had such a really limited personal life.

Morris: Really?

Dettner: Well, yes. I mean, I had a marriage which was in one way very satisfying, and in another way quite the opposite. You reach out for the things that will give you interest and stimulus. I've always enjoyed working with people, and I've enjoyed confronting the problems of our time.

Morris: And confront is the word for many of them, too. Yes.

Dettner: Well, my mother must have certainly inculcated in me a feeling that you have to have a part in the community, because when I was six years old in 1911, I organized a parade of children to urge votes for children. It was when women got the vote in California.

Morris: How marvelous!

Dettner: And I marched them all over Belvedere with signs. But, as I said at the beginning, I didn't start meeting people and getting around in the community until I was in the league, which really started everything.

Of course, Girls' High was the most marvelous experience for all of us.

Morris: It must have been. Did you have student government there?

Dettner: Oh, yes, I should say [that] I ran for president and lost, but Ruth [Chance] and Madeleine Lackmann--she was then, later married Justice [Roger] Traynor--and I were the debating team. We debated every school in San Francisco. The only people we lost to were Lowell, our very best. But anyway, this was marvelous;

it couldn't help developing a tremendous interest in issues, and a determination to learn and speak about them.

Morris: It's to our advantage that you kept up this interest.

Dettner: Well, I don't know. It was certainly to mine. I mean, having a tendency in that direction and opportunity which I did certainly makes one's life very interesting.

Morris: Yes. Were there other women in the league with whom you've stayed in touch?

Dettner: Oh, yes. Many of them were friends and had been friends from childhood or school. Oh, certainly. Well, for example, Ruth and I took Edie Green to lunch about a year ago. Edie and her sisters had all been friends of ours in school. You know, she was the great cook and established all those cooking classes for young women. I think she saved more marriages than anybody I could think of, because she taught girls who knew nothing about it how to put on a decent meal.

Morris: This is women of the generation who were raised with cooks at home? That's an interesting social change I've never thought of before.

Dettner: Oh, that was very real. You moved from a house which was properly staffed to a place where you were it.

Morris: Yes. How did she happen to think of starting a cooking school?

Dettner: Well, I don't know. I guess because enough of her friends and contemporaries were in terrible agony. As I say, I think she probably saved more marriages than Ann Landers ever did.

Morris: That's marvelous. And then there was Caroline Charles--but she would be later on in league presidents, wouldn't she?¹

Dettner: Oh, much later.

Morris: She speaks of Emma McLaughlin as her mentor. Did you know her?

Dettner: Oh, certainly. Well, in Emma McLaughlin's oral history, which Helene [Brewer] lent me, she speaks at some length of Caroline Charles, and in most glowing terms. My own contact with Mrs. Charles was extremely limited. I doubt that we could even have

¹Caroline Moore Charles, *The Action and Passion of our Times*, Regional Oral History Office, University of California, Berkeley, 1979.

found common ground for the pursuit of our respective interests, although we were on the board of the Council for Civic Unity together.

Council for Civic Unity; Emma McLaughlin

Morris: Tell me more about the Council for Civic Unity.

Dettner: Oh, I just was on the board for a while because I was, of course, interested in the subject. I liked Ed Howden, who was the executive of it. And it was just a board I served on for a while which I thought was doing good things.

Morris: Yes. You must have had a particular interest in racial equality.

Dettner: I did. My environment since early childhood had included many contacts with minority people, but my active interest in their place in the community was the result of my intimate acquaintance with Mary McLeod Bethune--the first black woman to hold an important position in the federal government. She was director of Negro affairs in the NYA. One could not fail to be impressed by the zeal and dedication with which she pursued her goal of equality of opportunity for black people, and her determination that black people themselves must assume their share of responsibility for the prevailing attitudes with respect to assimilation.

Morris: Was the question of race relationships particularly troublesome in San Francisco, or was it more a matter of the time has come and, of course, we're going to do something to improve things?

Dettner: The time has come. Right.

Morris: Did you know Bill Roth?

Dettner: I didn't know him well, but I knew him somewhat.

Morris: I understand he was one of the people who thought it was time that there be a Council for Civic Unity.

Dettner: Oh, definitely. And I think it was a very good thing that there was. I was very glad to be on its board. I wasn't on for a terribly long time. And it was certainly not one of the major things that I was involved with, but I believed very strongly in what they were doing.

Morris: But not everybody's cup of tea, probably--

Dettner: Exactly. Well, when I told Frank that Caroline Charles was on the board, he said, "I can't imagine why she was ever on that board."

Mrs. McLaughlin by that time was either dead or inactive. But Mrs. McLaughlin, of course, was still a very powerful voice in the league when I joined it and when I was president. I saw her, of course, all during that time. And then I didn't see her for a long time, because I was out of things in San Francisco. But she and Helene became great friends; so through Helene, I saw a lot of her during her later years.

I think I wrote this to Willa in a recent communication: Helene and I had a Japanese friend, Chio, a geneticist who was working with Carl Stern. We liked her very much, and she did a lot of recreational things with us. She met Mrs. McLaughlin through us, and she always referred to Mrs. McLaughlin as "distinguished pahson." Helene and I to this day use that term. [laughter]

Mrs. McLaughlin was very fond of Helene, so they saw a lot of each other. Helene and I were given use of a house of a friend of mine at Stinson Beach one summer. We enjoyed being there very much, and took advantage of the opportunity to have friends come over. One day, we assigned Chio the job of driving over "distinguished pahson" for lunch. Everybody had a lovely time.

Morris: Did she exert her influence as a power in the league when you were president? Did she have ideas about how a president should behave or otherwise?

Dettner: Not in any personal sense. I think she had very definite ideas about how the league should be conducted and how the people in it should conduct themselves. But I mean, she never said, "Now, sit on my knee and I'll tell you what I think you ought to do."

Morris: That was what I was driving at, actually.

Dettner: Oh, no. No, no.

Morris: Sometimes the presence of past presidents can be sort of dampening on newer leadership who try to go in a different direction.

Dettner: Oh, that's true. There was one episode--this goes back to the Depression relief committee I told you about and how, when the

state commission was appointed, it kicked out the San Francisco committee. The women members of the committee were sure that I had instigated, or at least strongly supported this move, when in fact I had been its strongest opponent. Well, Mrs. McLaughlin was so incensed when she read that the committee had been fired that she thought the league should conduct a trial, but somebody talked her out of it, and persuaded her, I believe, that I was not only not guilty but quite on the opposite side.

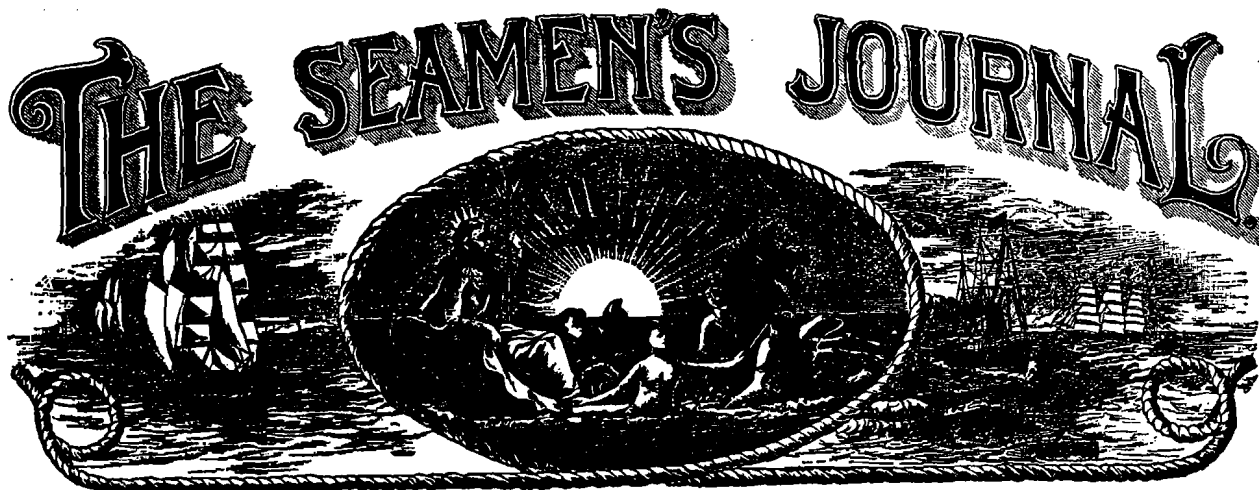
Morris: That brings us to a good stopping place, I think. Thank you for sharing so much of your experiences.

[End of interview]

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FOR THE SEAFARING PEOPLE OF THE WORLD.

A Journal of Seamen, by Seamen, for Seamen.

Our Aim: The Brotherhood of the Sea.

Our Motto: Justice by Organization.

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A "SHIP SUBSIDY" DEBATE

Girls' High School Orators Win Easy Victory for Negative

"Ship Subsidy" received a clean knockout in San Francisco when the debating team of Girls' High School met the team from the Humboldt Evening High School for a forensic battle upon the following theme:

"Resolved, That the United States Support the Policy of Subsidizing the Merchant Marine." The team from the Humboldt Evening High School presented the affirmative arguments. The Girls' High School team delivered the negative arguments.

The three judges of the debate were Mr. J. P. Martin, of the Anglo-California Trust Co., a graduate of Columbia University and a winner of medals as a debater; Mr. Maurice R. Carey, a distinguished member of the San Francisco legal fraternity; and Mr. T. D. Boardman, president of the Commonwealth Club of San Francisco.

The three boy orators from the Humboldt Evening High School made a valiant effort for the affirmative, but the brilliant young ladies from "Girls' High" were too well armed with telling facts and convincing logic. Moreover, they showed unusual ability in rebuttal. So the learned judges, who were not permitted to confer before announcing their decision, unanimously awarded the victory to the negative—i. e., to Misses Madeleine Lackmann, Ruth Clouse and Anne de Gruchy, the three talented representatives of Girls' High School.

The Journal is privileged this week, through the courtesy of Paul Scharrenberg, to publish the three arguments which won the unanimous decision for the negative.

First Negative by Miss Madeleine Lackmann

The question has arisen as to whether or not the United States should subsidize the merchant marine, and in discussing this subject we must determine whether or not a subsidized merchant marine would be necessary to the industrial progress of the nation; we must study the history of the subsidy and determine whether or not it has proved a success in the countries which have experimented with it; we must consider how such a plan would react upon the financial and economic status of the United States.

It is a self-evident fact that the development of an industry is dependent upon efficient management and co-ordination, and if these elements are lacking, and if the proper spirit is not backing up the industry, then no amount of money that it may receive will further its advancement. The shipping companies of the United States, at the present time, are not being operated with the proper spirit, for the general public, being primarily interested in the development of the interior rather than of the commerce on the seas, has been indifferent to the merchant marine. Now it is proposed to subsidize our ships, but such a plan cannot be feasible, for a subsidy does not necessarily mean efficiency, and a mere amount of money cannot possibly remedy indifference.

Perhaps it would be wise, before going further, to explain definitely the terms of the question and to outline the history of the subsidy. The merchant marine is a private industry operated by individuals who are presumably interested

in that particular branch of commerce. A subsidy, according to its dictionary definition, means pecuniary aid granted by a government to a commercial enterprise. The affirmative, then, proposes that the Government give a certain amount of money, not for value received in return, but merely as a gift to a private concern which is essential, no doubt, but not more so than numerous other industries are essential to the welfare of the general public. There is no logical reason why the merchant marine should be granted a subsidy, and why it should carry on its work, as a private industry, with the funds from the public treasury.

In looking backward we find that a subsidy law was passed in France in 1881 for the purpose of improving its merchant marine. However, the expected results were not attained, for inefficiency developed. Great fleets of large sailing vessels found it profitable, under the liberal navigation laws, to sail around the world much of the time in ballast. That is, a shipping company would send one of its vessels on a trip around the world with practically no cargo. This was certainly a convenient paying proposition for the various shipping companies who found it unnecessary to develop a high degree of efficient management, knowing as they did that, at any rate, they would inevitably receive a subsidy from the government. Perhaps the affirmative advocates that our Government adopt a similar plan in order to encourage so-called "greater efficiency" in our merchant marine.

Italy has experimented in the same way as France with as little success. Spain granted money to its merchant marine, but suspended its law of 1909 at the outbreak of the war, and this was done at the request of the subsidized companies, who stated that they could make ample profits without the aid of the Government. Austria and Hungary experimented with laws similar to those of France, but attained comparatively little success, although large amounts were paid out. In every case the subsidy has been used as an artificial remedy, but it has never served as a strong, permanent foundation upon which to build an efficient and an independent merchant marine.

It is true that in Japan, subsidies have been granted with some degree of success, but the economic conditions of that country are entirely different from those prevailing here. The immense population of Japan makes it necessary for her Government to subsidize, not only the merchant marine, but also the silk industry, the tea industry, and every other essential branch of her commerce. The Japanese Government must do this in order to avert any disastrous unemployment situation which might arise in that overcrowded nation. As no such conditions exist in the United States, it is not necessary for our Government to subsidize any of our industries.

The more important seafaring nations have never advocated the plan of a general subsidy. Great Britain, for decades the leading maritime nation of the world, has never at any time granted any aid to its freight or cargo steamers, and this is likewise true of the majority of its passenger ships. It is a significant fact that the White Star Line, a company which received

no aid whatsoever from the British Government, has been far more successful as an earner of dividends than the Cunard Line, its subsidized competitor. This again merely serves to prove that the difference between the success and failure of the merchant marine lies in the difference between efficiency and inefficiency; that the mere granting of a sum of money by the Government to a shipping company does not necessarily foster initiative and capable management.

As another case in point: Before the war the German merchant marine developed in a phenomenal way, although it never received financial aid from the Government except for service rendered, such as the carrying of mail, etc. The Hamburg-American Line, which was one of the largest and most successful companies in the world, had never at any time received a subsidy. Its success was due principally to efficient co-ordination and direction, which made it independent of any Government aid. Norway, Sweden, and Denmark have merchant marines that rank among the largest in the world, despite the fact that they do not grant subsidies.

Thus having reviewed the experience of the various countries in connection with the merchant marine, we find that the leading maritime nations of the world have never granted subsidies to their respective shipping companies; that Japan is the only country which has found the subsidy practical; but since the economic conditions of that country are entirely different from those prevailing here, the two countries cannot be fairly compared. We find, furthermore, that in every other country in which the subsidy has been tried as an artificial stimulus, it has instead produced inefficiency and retarded the permanent success of the merchant marine. We learn by experience, and the experience of other countries tends to prove that the subsidy would be unnecessary in this nation.

At the present time, the United States merchant marine possesses several unusual advantages which enable it to compete with any other nation in the world. It has a complete monopoly of all coast-wise shipping, and statistics show that the freight tonnage carried in the coasting trade of the United States exceeds the total freight transported in all the ships of any other country with the possible exception of Great Britain. No other country has such extensive stretches of coast with so many valuable ports which are easily accessible, together with the varied commodities seeking water transportation. It must be remembered that all of the coasting trade of the United States is absolutely reserved to ships operating under the flag of our country, and naturally this has materially promoted the development of American shipping. Furthermore, the United States merchant marine controls a large part of the traffic on the Great Lakes, and the commerce operated on this route is larger than that which passes through the Suez Canal. It has been proved that the vessels used in our coast-wise trade can be used likewise to make ocean

voyages, and thus we see that this one aspect of the activities of our merchant marine presents many potential powers.

Therefore we see that we have the foundation of experience on which to base our shipping commerce; we have the materials and the power with which to build it up; and we need but one thing more—efficient management fostered by the active interest of the public. It is incumbent upon us, as a nation, to encourage initiative and stimulate efficiency in our shipping companies. For reasons too numerous to mention we should foster and develop one of the greatest merchant marines of the world, not, however, with the temporary prop of a subsidy, but with the given permanent materials which we now possess.

Second Negative by Miss Ruth Clouse

It is, of course, well known that most American industries have grown greatly and acquired strength since the Civil War. But it is a peculiar fact that the Merchant Marine, unlike the other industries, has failed to prosper and develop and to compete with other nations. There are several reasons for this, but the one most commonly advanced by those who favor the subsidy is that the American shipowner is forced to operate his ships under difficulties, inasmuch as certain laws and regulations in the United States force him to pay his employees a much larger salary than paid to seamen on foreign ships, and that, therefore, he is not on a fair competing basis with other nations. And so, in order to equalize matters, it is suggested that the Government give to the merchant marine a subsidy to make up for this higher wage paid to the Americans.

Of the total expenditures of the American trading vessels between 7 and 12 per cent—never more, usually less than 10 per cent—is paid out in wages. Now, we admit that this is a very good sized item when we remember that the Chinese sailor is paid only a fraction of that amount. However, the efficiency, which is the keynote of the present-day world, is not found in the Chinese, who, though they come of an extremely economical race, are just at present waking up to the industrial possibilities of their nation and are not well acquainted with the modern efficiency methods. The Europeans, while more progressive than the Chinese, have been somewhat retarded by their traditions; but America, being free from these barriers, has accepted with outstretched arms anything which spells progress. Efficiency typifies the American seaman. And because of the lack of this efficiency in the Chinese and other low-wage foreign sailors these cheap men of other nations will soon consume in wastefulness in the fire-room an amount that greatly exceeds the higher wages paid to the American seaman, who is required by law to be skilled and efficient. That the American merchant marine can compete with other nations, and without a subsidy, is proved by many industrial parallels. It is clearly shown by the fact that American manufacturers of shoes, sewing machines, typewriters and other articles, paying to their employees the highest wage found anywhere, are able to sell their American-made products in Europe cheaper than the articles manufactured on that continent. The laborers over there, while they are paid a much smaller wage, lack the efficiency found in the skilled American workman, hence their product must sell higher.

Higher wages, combined with greater skill and economy, then, are more economical in the last analysis. And did anyone of us ever hear of a subsidy for the American shoemakers just because they paid higher wages than were customary in other countries? And yet this is the most common plea upon which those in favor of the subsidy base their contention. However, we contend that there is another phase to the wage question, and it is one which proves the claim to a subsidy, because of higher wages, totally fraudulent.

It is interesting to note that these very steamship companies, which lament so eloquently on the alleged high wages they are forced to pay to American seamen, and on the fact that there has been no assistance by the Government in the form of a subsidy, do not employ on their ships these highly-paid Americans, but rather choose to employ Chinese, whom they import to this country to become sailors and who are placed on ships in our own port of San Francisco at the lowest wage that a Chinese will work for. This, the Supreme Court of the United States, in the case of "Scharrenberg versus the Robert Dollar Steamship Company," has declared, is not in violation of the Chinese Exclusion Act, nor is it an infringement on the Seamen's Act if 75 per cent of these Chinese can be taught to understand the language of the ship's officers.

The last time that a bill for subsidizing the American merchant marine was brought up in Congress, those in favor of it discoursed brilliantly on the fact that the American seaman was paid such a high wage that the Government should lend a helping hand to the steamship companies. And is it not a peculiar fact that these same men voted vehemently "no" on an amendment which would have provided a subsidy for all ships except those whose crews were made up of Chinese sailors.

Therefore, the plain facts of the case stand bare: That while the owners of the American

merchant marine base their right to a subsidy on the ground that they pay high wages to American seamen, what they really want is both the subsidy and the right to employ Chinese. For a quarter of a century America has answered "NO" to their wail and the fallacy of their arguments makes them worthy of little sympathy.

The United States is a country peculiarly situated inasmuch as it is an immense stretch of land wherein may be found practically every variety of climate, and, as a consequence, a growth of almost every necessary product. If, like Great Britain, the United States were a small island with never more than a month's provisions available for her immense population; or, if like Japan, the United States were an island overcrowded with people, then, of course, we might subsidize our ships in order that we might be assured of an existence. But when an immense country, which is absolutely self-sustaining, suggests subsidizing its merchant marine, it can be seen that, to say the least, it is unnecessary.

To subsidize our trading vessels would, of course, mean that money should be taken from the United States treasury and given to the various shipping concerns. The money in that treasury is from taxes paid by the people. If we do subsidize our vessels it will mean another raise in taxes and to again raise the taxes of an already overburdened public would be nothing less than outrageous for such an unnecessary cause. It can hardly be right to tax a people who are struggling under a debt caused by an immense war in order that a few steamship companies may reach into the pocket of Uncle Sam and get the money with which to support themselves. And why on earth, in the first place, should the people of the United States support a private industry? Is there anything reasonable in such a process? If the merchant marine does a service for the nation let us repay it as in the case of our paying for the transportation of mail, and if, as Americans, we would glory in seeing our merchant marine mistress of the seven seas, it is not by subsidies that this will be accomplished, for history tells us that the greatest merchant fleets have been built up without subsidy, as in the cases of the Hamburg-American line and the merchant marine of Great Britain, who, though totally dependent for necessities on her trading vessels, gave up the plan of subsidies and is today the premier country in ocean commerce. Again, there is the instance of our own merchant marine, which, before the Civil War, without subsidy, rose to first place. The reasons why our country has not remained on top can be explained in three parts.

First, History teaches that "from the days of the Phoenicians and Tyrians mastery of the sea has been won and held by the country which could furnish the greatest number of skilled and valorous seamen. No nation ever developed sea power unless it furnished the seamen from its own population. No nation has long retained seapower after its men quit sea. A brief outlining of the maritime histories of the Hanseatic League of Venice, of Genoa, of Spain, of Portugal and of The Netherlands, proves that the really great sea powers were those whose own men manned their ships. There came a time when the life of the sailor was not all romance, when desertions were punished by branding the deserter's face with a red-hot iron. This treatment, combined with low wages, soon checked the trend of the people to the sea. And immediately began the gradual downfall of these maritime nations. In 1913 less than 7 per cent of the seamen, excluding officers, employed on American vessels were native-born Americans. So we contend that America can prove no exception to the rule. Experience has shown that other merchant fleets could not hold their own under these circumstances, and it, therefore, follows that the merchant marine of the United States cannot.

Second, The American merchant marine, as I have previously stated, ranked first among the merchant marines of the world before the Civil War. This was the era of the wooden ship. The time of the Civil War really marks the first evidence of the decline of our merchant marine, inasmuch as during this period she was retarded because a great number of her trading vessels were destroyed by Confederate ships. The second was that immediately following the Civil War America turned all her energy toward developing her interior, paying little heed to the construction of iron and steel vessels.

The third reason: It is not generally known that American railroad companies have contracts with foreign steamship companies, while American vessels lie idle. Yet, this is an undisputed fact—recently brought to public notice by United States Senator Ransdell of Louisiana.

When we fully realize that our railroads have made secret contract with British, Japanese, Scandinavian and German ships while our own merchant marine is forced to tie up hundreds of vessels for lack of freight and that these foreign steamship lines continue to gain steadily in the per cent of our ocean commerce which they carry, while our vessels transport less and less then, perhaps, we are at the root of the evil.

Third Negative by Miss Anne De Gruchy

My colleagues have spoken of the practical and specific reasons for opposing the proposed subsidy of the merchant marine, in turning to the economic side of the question, we shall be dealing more closely with the general and theoretical phases of the subject. In this portion of the discussion three questions are involved: (1) Why a subsidy of the merchant marine would be an economic evil for the industrial life of the community? (2) Why subsidies of private industries should in general be discouraged? (3) Why a subsidy of the merchant marine could never be satisfactory in any way?

At the present time the United States is a country in which vast enterprises take root and, through the efforts of their promulgators, grow, with the result that production on an enormous scale is going on in every branch of industry. The most zealous of us, however, will admit that as yet the natural resources of this country have been barely touched. What is the inevitable result of such a condition? Yearly hundreds of industries are springing up, many of them with glorious possibilities, many of them with little or no financial support. It is the duty of the Federal Government in such cases to step in and lend a helping hand in order that the young industry need not perish. This is frequently done and it should be done with industries not yet past what is known as the "infant stage." The merchant marine is far from being in its infancy, neither is it in any way nearing bankruptcy. My colleagues have fully explained the reason for the present condition of the American merchant marine, and it may easily be seen that this claimed inferiority is not due to any lack of financial aid. We must remember that the Government has only a limited amount of money to use as subsidies. Hence, and here we come to the crux of the whole matter, have we the right as citizens to subsidize our already financially independent merchant marine when that subsidy would mean the starving out of countless promising industries, and to leave barren and arid huge areas of land rich in resources of every nature?

Let us now turn our attention to the benefits of subsidy in general. An industry is started supposedly because it has some claims to economic soundness, and by economic soundness we infer that it has some guarantee of ultimate success. If an industry is not economically sound it should never have been started, and certainly it should not be made a burden to the Government. If it is economically sound it is reasonable to suppose that eventually it may struggle out of its difficulties and achieve economic independence, at least after it has past the earliest stages of its existence. Then why subsidize and continue to support it, wasting money and curbing the natural initiative of its promoters by bolstering them up and forming for them a prop which in time would render them entirely incapable of original activity and self-sustaining life.

America is a country so constituted that every individual or group of individuals in it has first, last, and always, a fair chance. The democracy of this great republic makes it practically impossible for any industry with the remotest chance of ultimate success to be crushed out of existence. Then why pretend that it must have special privileges and special support? Why waste vast sums of money where they will do more harm than good?

Subsidies, then, if we open our eyes to conditions, must seem, from no matter what angle they are approached, to be economically an evil. Either they burden the Government with dead wood, pernicious, blood-sucking enterprises, good only to drain thoroughly the pockets of the public, or we lavish support where it is superfluous, putting on a dependent basis industries which should and which could, with unhindered American brains and ingenuity, flourish independently.

Let us revert once more to the statement made some time ago concerning the present inferiority of our merchant marine. Knowing that this has not by any means always been the prevailing condition it is only natural that we should wonder at its prevalence now. And it is equally natural that as Americans we should wish, if even in the most passive way, for a remedy. And it is here in the use of the word passive that we reach the root of the whole question. Prior to the Civil War America was undeniably mistress of the seas, but our merchant fleet has been growing less and less important. For the past half century America has turned her eyes inward upon herself. She has been absorbed by the opening up of new territory, by the starting of new industry. Perhaps we have been right—these enterprises have led us to commercial greatness. But why, will someone tell us, do we try to cover up our lack of interest in our merchant marine by waiting for a subsidy?

Is it because the American people care nothing at all for the future of their merchant marine? Contrast that with Great Britain, where the success of the merchant marine means bread and butter to practically every man, woman and child. Do they know nothing of conditions? They know everything about them, and what is the result? Take a concrete example. The "Imperator," taken from Germany during the

(Continued on Page 11.)

MR. TAFT WANTS DIRECT ACTION?

(Continued from Page 9.)

has always been assumed that labor was a proper subject for classification—that the relation existing between employer and employee made it so. On that theory employers' liability statutes have been sustained. On that theory the Clayton Act was passed and on it rests the exemption of labor and farmers from many State anti-monopoly statutes. Indeed, it is on that theory that labor is often told to look to the legislatures for relief from the disadvantages at which it finds itself in the industrial struggle.

The Supreme Court now tells us that this theory is not constitutional—at least as to workers who are on strike—and throws us back on the necessity of working out the problems of industrial relations by the same conception of property rights and actionable injuries which governs other and less fundamentally antagonistic relationships of human society. We have not the power, within the Constitution, to vary those rights so as to put labor in a position favored above others. We cannot experiment in the field so as to put considered proposals to the pragmatic test. Indeed the Chief Justice says: "The Constitution was intended, its very purpose was, to prevent experimentation with the fundamental rights of the individual."

Well, so be it. The highest court in the land has spoken and we now know the limitations of our power. We cannot, if we will, follow the example of England in her Trade Disputes Act of 1906. What courses are left? They are not many, nor are they promising.

Organized labor can adopt the slow and discouraging course of agitating for the adoption of a Code of Industrial Relations by constitutional amendment; it can bow to the inevitable and be content to eat humble pie; or it can attempt to break the power of the judiciary by direct action. These alternatives are not pleasant to contemplate.

If in future years *Truax vs. Corrigan* comes back to plague us in terms of defiance of the courts, we shall know where to assess the blame.—The (New York) Nation.

JEFFERSON AND INJUNCTIONS

Thos. Jefferson said of the injunction process:

"The germ of dissolution of our Federal Government is in the judiciary, an irresponsible body working like gravity, by day and by night, gaining a little today and gaining a little tomorrow, and advancing its noiseless step like a thief over the field of jurisdiction until all shall be usurped."

And again:

"If we ever lose our liberties it will be through the action of the Federal judiciary, who with a life tenure of office will feel themselves the law and construe away the dearest rights of the people."

The man who puts himself before the cause is traveling a road which may bring apparent temporary gain to himself for the time being, but in the long run he generally injures himself as well as others by such short-sighted selfishness.

WEEKLY NEWS LETTER.

(Continued from Page 3)

roads is being considered by the Railroad Labor Board, on appeal by the Railroad Shop Employees' Department of the American Federation of Labor.

Party Lines Weaken

The weakening of party lines in the national lawmaking body alarms the non-partisan element known as the "Old Guard." For years special interests have secretly operated as a bloc. Nothing was ever said about this bloc by men who are now protesting against the formation of groups that defy party discipline and publicly announce their purpose.

The Senate farm bloc is the present concern of special interests, and its defenders. Groups representing economic interests, organized along non-partisan lines, is the nightmare of those who have prospered under party discipline.

The weakening of party rule marks the beginning of a new era in legislation, and is in line with forty-year declarations by the American Federation of Labor.

The "Old Guard" is bewildered because its orders are being ignored. Various methods have been discussed to check the new movement, but to date nothing has been found that will restore the good old days.

A "SHIP SUBSIDY" DEBATE

(Continued from page 2)

war by Great Britain, has for the past two years been making regular trips between England and the United States carrying thousands of passengers annually. In contrast, the "Leviathan," taken by the United States, seems to have seen her final service as a troop ship. Since the war she has lain idle and positively rotting on the docks at Hoboken. In the meantime valuable money is being used to support a huge army of watchmen. Briefly, this is the situation, and it is the situation that American citizens have brought upon themselves, and, frankly speaking, it is the situation that they want.

But to cover up that negligible fact they go with outstretched hands to Uncle Sam for money to make us "supreme upon the seas." The public is emotional; sober second thought will come later, and when they hear the cry "put our flag upon the seas" they are inclined to be overgenerous and turn a sympathetic ear to the private shipowner's plea for money and still more money from the public purse. But in their hearts they know, they must know, if they are not blind to every existing condition, that it is only American brawn and brains which can ever restore our former position. Truly, there are some things which money cannot buy.

To summarize briefly, then, we do not need a subsidy for our merchant marine. Conditions do not warrant it, and in many respects it would do more harm than good. Moreover, such a subsidy would jeopardize the industrial welfare of the country by taking possible support from other industries. And lastly we hope to have shown that a subsidy of the merchant marine can never accomplish the things that we should expect and demand from it. It is not a subsidy that will put our flag upon the seas and our youth into the ships.

At best we can learn only by experience. The experience of others has been pointed out and we trust that the difference between other countries and our own, in this respect, has been made obvious. We have seen enough to know that mob-yelling, emotionalism, and cries for "our country above everything," when they are accompanied by no action of any sort, lead to a terrific noise, and stop there. Let us, as American citizens, with the best interests of our country at heart, press forward to overcome the element of begging, those who cringe in the semi-darkness of their half-truths, begging for an annuity for themselves, which, for lack of a better name, they have called a subsidy. Let us stand alone, trusting to our native ability, our initiative, and our own skill. Let us, in short, be Americans in the true sense of the word, and then, when we have achieved that, then, and then only, may we talk of the greatest merchant marine of all ages; then may we prepare to see our flag supreme upon the seas!

National 8196

APPENDIX B

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May 21, 1935.

(Air Mail)

Honorable George Creel,
1099 National Press Building,
Washington, D. C.

Dear George:

Mrs. Earl F. Treadwell is leaving for Washington tomorrow, arriving there at the end of the week, for the purpose of taking up certain problems on behalf of the State Emergency Relief Administration with Mr. Hopkins and others. She will be staying at the Hotel Mayflower for some days after her arrival next Saturday evening.

I know of your high regard for her and that you will be glad to see her and to be of assistance to her while she is in Washington. I have suggested to her that she call upon you.

You will recall that she is a member of our new S.E.R.A. Commission. Since your departure she has been doing extraordinary and splendid work in connection with the State Relief Administration, and those who are familiar with the situation believe that she has contributed more than anyone else to what has been accomplished here during the past few months.

Always devotedly yours,

MEH:KH

May 21, 1935.

Honorable W. B. McAdoo,
Senate Office Building,
Washington, D. C.

Dear Mac:

I have just given Mrs. Earl F. Treadwell of this city a letter of introduction to Miss Ward, asking Miss Ward to assist her in the matter of getting in touch with government officials in Washington.

Mrs. Treadwell is one of our Democrats here for whom George Greel and I have a very high regard.

I am writing you this personal note to supplement my letter of introduction and to ask that your office assist Mrs. Treadwell in connection with her study of the emergency relief program in which she is especially interested.

Yours sincerely,

WEN:KH

May 21, 1935.

A. Cyril Lynne, Esq.,
Department of State,
Washington, D. C.

Dear Cyril:

Mrs. Earl F. Treadwell, who is a friend of Margaret's and mine, and who is doing distinguished work on our State Emergency Relief Administration as a member of the State Commission, is coming to Washington this week, arriving by next Sunday, May 26th. She will be staying at the Mayflower Hotel.

The purpose of her visit is to take up with Mr. Hopkins and others in charge of national relief problems those questions which have a bearing on the California relief situation.

It is her first visit to Washington and Margaret and I will appreciate it very deeply anything you may do to assist her or to make her stay in Washington a pleasant one.

Always yours,

MEH:KH

W. I. BROBECK (1892-1927)
 HERMAN PHLEGER
 MAURICE E. HARRISON
 HOWARD J. FINN
 GREGORY A. HARRISON

JAMES S. MOORE, JR.
 SOUTHERN R. PFUND
 THEODORE R. MEYER
 MOSES LASKY
 A. M. DREYER
 M. B. PLANT

BROBECK, PHLEGER & HARRISON
 ATTORNEYS AT LAW
 CROCKER BUILDING
 SAN FRANCISCO

CABLE ADDRESS
 BROBECK

May 25, 1935.

Mrs. Earl F. Treadwell,
 Mayflower Hotel,
 Washington, D. C.

Dear Mrs. Treadwell:

Mr. Henry F. Grady, who, as you doubtless will remember, was Dean of the College of Commerce of the University of California, and who now holds an important position in the Department of State in connection with problems affecting foreign trade, happens to be in San Francisco for a short visit, but is returning to Washington within the next day or so. I told him of the fact that you were in Washington, and he said that he and Mrs. Grady would be happy to give any possible assistance to you while you are in Washington. If you should have occasion to call upon Dean Grady, I am sure that he will be very glad to see you.

Yours sincerely,

Samuel E. Harrison

Member of National Democratic Committee

MEH:KH

S. F. News - July 1935

Dynamic Mrs. Treadwell Due To Head State Youth Drive

Member of SERA Board
Expected to Receive
New Job

Mrs. Earl F. Treadwell of San Francisco, member of the State Emergency Relief Commission, and women's field representative for the Federal Housing Administration, probably will be named California director of President Roosevelt's 60 million dollar National Youth Administration, according to word received from Washington today.

Mrs. Treadwell was in Washington recently, representing the State Emergency Relief Commission. She was the youngest president the San Francisco Center, California League of Women Voters, ever had, when she held that office two years ago, and is now a member of the board of directors.

Small, dark and dynamic, Mrs. Treadwell is still on the leeward side of her 30s. She was an energetic worker in marshaling local women behind the NRA drive.



MRS. EARL TREADWELL.
Another big job in offing.

STATEMENT PREPARED BY MR. RALPH E. JENNEY, CHAIRMAN OF THE
STATE RELIEF COMMISSION TO BE SUBMITTED TO THE NEXT MEETING
OF THE COMMISSION AND COMMENTS THEREON BY THE STATE ADMINISTRATOR

(Note: The paragraphs shown in quotes represent the Chairman's statement and the paragraphs below each consecutive paragraph represent the Administrator's comments on the Chairman's statement.)

1. "Recent releases by Frank Y. McLaughlin, Federal Works Progress Administrator for California and State Relief Administrator, indicate that the figure of \$202,000,000 is still the Federal allotment for this State, expendable by California during the fiscal year ending June 30, 1936."

The allotment of \$202,000,000 for the State of California was based on a case load of 192,500, or an average man-year cost of \$1,050. The allotment represents all the money to be furnished to the various agencies of Government that will do work under the new program, including the work to be done directly by the Works Progress Administration. I have informed the authorities in Washington that our actual case load, including transients, is 290,276 instead of 192,500, which was the quota of unemployed assigned to this State.

2. "Should Federal allotments be made on a basis of case load rather than on a basis of population, California's share would be approximately \$280,000,000. And that was, as we understood it, the basis announced by the President when the Congress made available more than \$4,000,000,000 for work and relief programs in the United States."

I have informed the Federal authorities that it shall be my objective to secure sufficient projects to place the entire case load of 290,276 at work. It would be much better, in my opinion, to provide work for all the unemployed, even though the money lasts only eight months, than to provide work for two-thirds

of the unemployed for a whole year. If we are able to develop sufficient projects (and I am sure we will be if the present limitation of cost of \$25,000 is increased and the sponsor's contribution of 20% is decreased) to provide jobs for all of the eligible unemployed in the State, I am certain additional Federal funds will be provided. There should be no worry on this score as I have already informed the Federal authorities that I am going ahead with the objective of putting all of the eligible unemployed to work.

3. "The difference in the allotment actually made and the amount allowable under equitable distribution may mean the difference between a successfully operated work and relief program and a make-shift program."

This is answered in the preceding paragraph.

4. "As a result, it is necessary to exercise pressure to interest local political subdivisions in a Federal work program on a basis of 20% participation. This plan is even now meeting with stubborn resistance on the part of Los Angeles and San Francisco. I understand that Los Angeles has virtually refused, and that San Francisco intends to join Los Angeles in such refusal, to sponsor projects where any cash, material or supervision whatsoever is to be contributed by the sponsor. Both of these cities have prepared and, it is understood, are to submit directly to Washington plans for a 100% Federally underwritten program. Indications warrant the fear that their demands may be at least partially complied with by the Government at Washington."

I was officially informed that sponsors would be expected to contribute not less than 20% of the total cost of projects. It is estimated that approximately 40% of our total relief load will be represented by persons eligible to work on professional and service projects. We have no limitation of cost on projects in these fields of activity and we find that the cost of material and supervision on

such projects is about 5% of the cost of the projects. The \$25,000 limitation and the 20% contribution by sponsors applies to only approximately 60% of our program. I have recommended to the Federal authorities that the \$25,000 limitation be increased to \$100,000 and that on certain types of construction projects, such as storm drains and sanitary sewers, there be no limitation. Projects for park improvements, recreational facilities, curbs and gutters are not limited to the \$25,000 cost. I have also recommended to the Federal authorities that the 20% contribution by sponsors be decreased to 5%.

It is correct to state that Los Angeles has virtually refused to provide in excess of 5% of the cost of the projects it will submit to WPA. The City of Los Angeles is prepared to submit a program of 160 projects involving 52,000 man-years and \$57,000,000, on which it will contribute \$2,900,000, or slightly in excess of 5%. Mr. Lloyd Aldrich, City Engineer of Los Angeles, is now en route to Washington, due to arrive there about August 15th, for the purpose of submitting the City's program to Mr. Hopkins and Mr. Hinckley. We have an arrangement with the PWA in San Francisco that various projects such as sanitary sewers and storm drains, which exceed a total cost of \$25,000, may be rejected by the PWA and made eligible for the WPA. The program which Mr. Aldrich will submit in Washington contains 160 such projects with a total estimated cost of approximately \$57,000,000, representing 52,800 man-years of work, or a total estimated cost per man-year of slightly in excess of \$1,000. Mr. Aldrich informed me that he is prepared to present documentary evidence that the City of Los Angeles cannot provide more than 5% of the cost, or \$2,900,000, as the City has already exceeded its limit of bonded indebtedness.

In San Francisco the following procedure is to be followed:

1. The city will set up work projects covering a six months period indicating such contributions as they are able to make from current funds which will probably be between 5 and 10 per cent.
2. The city will undertake to endeavor to raise additional funds by means of a bond issue with the understanding that such funds will be used as contributions toward projects to be submitted for the second six months period.
3. Projects will be prepared on the basis of the security wage, using for estimating purposes a period of 120 hours per month.

The City of San Francisco had prepared a program representing \$25,000,000 worth of work represented by 119 projects. I find that out of the total, only 86 projects may be considered acceptable to the WPA. The 86 projects account for only 43% of the total number of man-years shown. The remaining projects are of such size or nature that they should properly be submitted to the Public Works Administration. In addition to the 86 projects that we believe to be eligible, the city has a program involving the setting back of curbstones and the construction of gutters that will cost about \$2,000,000. I believe this project can be considered acceptable to the WPA on the terms of Bulletin No. 14.

The City and County of San Francisco is prepared to include in its program the construction of the San Francisco Bay Exposition on Yerba Buena Shoals which is estimated to cost \$12,500,000. On this particular unit of the program \$5,500,000 will be furnished in cash. I have been reliably informed by the authorities in Washington that this particular unit is being given careful consideration by the WPA executives.

5. "San Francisco may undertake to hold a \$5,000,000 bond election in November and, upon the assurance of a reasonable attempt to pass the bond, it is understood that the Works Progress Administration will be expected to advance 100% of such sums as may be required to presently maintain a work program in

that locality. It is felt by competent observers that the bond issue may, and probably will, not be approved at the election, and that such approval will not be sincerely and diligently sought by San Francisco officials. Should the bond issue be defeated, it will then be suggested that San Francisco has exhausted its resources and the City may, with some grace, demand the continuance of the 1905 Federally financed program.

The facts concerning a bond issue in San Francisco are, in my opinion, correctly stated in paragraph 5. The special bond elections held throughout the State on August 15th covering some \$17,000,000 for public improvements were defeated by a heavy margin.

6. The rest of the State generally are proceeding, in good faith and in a sincere attempt to meet existing conditions, to raise funds with which to meet the 20% sponsorship requirements. In many instances--particularly in the smaller communities--this is a real hardship. Should the larger cities receive the whole or any substantial part of their demands, great bitterness will be engendered as a result of the inequality. Much adverse criticism is now prevalent throughout the State because unemployed have not been uniformly returned to the local political subdivisions; and this feeling should not be aggravated.

7. In these particulars, some definite and firm Federal policy must be made known and must be invariably followed, else confidence in the good purpose and intent of the whole work program will inevitably be shaken. Uniformity in requirement is even more important than the percentage of contribution. The amount thereof must, therefore, be gauged by the ability of the State as a whole to meet the requirement.

(Combining paragraphs 6 and 7):

I unqualifiedly favor uniform procedure throughout the State concerning the sponsors' contributions. The recommendations that I have already made in

this regard are now being considered in Washington and I hope to have some definite information concerning them within the next week or ten days.

8. "Of primary importance also, during this period of heavy unemployment, is the problem of planning a definite financial program for the State. Any such planning must be based, necessarily, upon the assumption that the Federal Government will continue to carry a share of the cost, commensurate with its broader taxing powers and more diversified sources of revenue."

I am in complete accord with the statement contained in the preceding paragraph. The following tabulation shows the total cost of all relief programs from January 1, 1933, to June 30, 1935, and the sources of the funds:

	TOTAL	%	FEDERAL	%	STATE	%	LOCAL	%
1933	39,138,769	100	17,922,002	45.8	1,752,125	4.5	19,452,642	49.7
1934	66,830,151	100	48,434,319	72.5	45,054	.1	18,350,776	27.4
1935 (6 mos.)	71,725,731	100	46,370,535	64.6	24,596,951	34.3	758,245	1.1
Total	177,694,651	100	112,707,364	63.5	26,400,130	14.8	38,587,156	21.7

9. "The provision for \$24,000,000 made by the State Legislature in the general fund budget for the first half of the current biennium, and a like sum for the second half thereof, was predicated upon a distinct understanding with Federal authorities that these amounts fairly represented the reasonable financial responsibility of California for all unemployment relief. These State appropriations were definitely based upon the proposition that California was thereby and for the entire biennium providing as much money for relief and distress due to unemployment as it was financially able to raise. That such is the fact is clearly indicated by the present unbalanced budget of the State."

10. "We are informed that prior to the submission of the two \$24,000,000 bills to the Legislature, Frank Y. McLaughlin, as State Relief Administrator, discussed all known aspects of this matter with Federal officials. He received at that time assurances that the appropriations and the manner of expenditure thereof, as provided in the proposed bills, were satisfactory to the Federal Government; and, in fact, constituted the reasonable contribution of the State of California to the relief program for the biennium. It was also, we are informed, the understanding at that time that any sums, in addition to those provided by the State, necessary for the relief of distress due to unemployment, would be supplied by the Federal Government."

(Combining paragraphs 9 and 10):

It is correct to state that the Federal authorities agreed that a contribution of \$48,000,000 on the part of the State for the current biennium would be deemed to be an equitable contribution. It was made clear, however, that other political subdivisions would be expected to make contributions in addition to the State's \$48,000,000. The Federal Emergency Relief Appropriation Act of 1935, approved April 8, 1935, provides the sum of \$4,000,000,000 for relief and work relief to be used at the discretion of the President until June 30, 1937, the last day of the current biennium. It was assumed by the State and Federal authorities that the respective funds would be spent over a period of two years ending June 30, 1937. Subsequently, on or about June 1, 1935, the Federal authorities decided that the entire 4,000,000,000 should be spent during the first year of the biennium, ending June 30, 1936. It appears reasonable to assume, therefore, that it would only be equitable that the State's appropriation of \$48,000,000 be spent over the same period as that of the Federal Government. It is true that in the great majority of cases the cities and counties are unable to maintain their average of 21.7%, in fact, they cannot maintain an average of 10%. The State has appropriated \$24,000,000 for the next fiscal year, at which time, according to the present

Federal policy all Federal funds will have been exhausted. Again it appears equitable that the State should come to the aid of the political subdivisions and supply their share. I do not mean to infer that the State should continue to finance 36.5% (State and local combined) of the unemployment relief burden, but I do maintain that it should spend its funds concurrently with Federal funds and supply in part, from State appropriations already made, the deficiencies of the local subdivisions.

11. "The operations of the unemployment relief program, as undertaken by the Works Progress Administration, would largely solve the entire relief program—if ideally consummated. We realize too well, however, that difficulties already in evidence make impossible any such an ideal consummation."

I am in complete accord with the views expressed in the preceding paragraph. The delays encountered in getting the WPA program under way were unavoidable. It was not until we had attended the Federal meeting in Washington during the week of June 17th and the regional meeting in Salt Lake City from July 1st to 3rd, that we had the necessary instructions that would enable us to proceed with the WPA program. As of August 15, 1935, we have received about 1700 applications representing 40,000 man-years and approximately \$25,000,000 dollars. As of the same date 806 applications, representing 16,314 man-years and \$12,566,668, had been forwarded to Washington for approval. We had not received any approvals from Washington as of August 15th. We anticipate difficulties in getting sufficient applications because of the \$25,000 limitation on certain WPA projects and the requirement of a minimum contribution of 20% on the part of the sponsoring agency. Recommendations have been made to Washington that we hope will remove these two impediments to securing applications. We have, however, scheduled our

WPA program tentatively as follows:

<u>Month</u>	<u>No. to be Employed</u>
September	50,000
October	150,000
November	200,000

We have made no estimates beyond November of the number of persons that will be put to work under the WPA program as we are awaiting decision from Washington on the limitation of the cost of projects and contributions on the part of the sponsors. The following tabulation shows an estimated division of relief clients between SERA and WPA through November 1935, and is based upon our estimated general unemployment case load for the month of June 1935:

<u>Month</u>	<u>Grand Total</u>	<u>S.E.R.A.</u>		<u>W.P.A.</u>		<u>Other Federal Agencies</u>
		<u>Indirect</u>	<u>Direct</u>	<u>Total</u>	<u>Work</u>	
July	229,800	151,200	78,600	229,800		For the present it is assumed that other Federal Agencies doing work under this program will absorb Transients and seasonal increase in case load.
August	220,000	146,700	73,300	220,000		
September	220,000	96,700	73,300	170,000	50,000	
October	220,000		70,000	70,000	150,000	
November	220,000		20,000	20,000	200,000	

12. "Few now believe that unemployment relief is entirely an emergency measure. It seems reasonable to assume that it will continue to be a major problem for some time. Manifestly, the situation will become even more acute as the spending of the State's second \$24,000,000 takes place. It is, therefore, felt essential that California's relief expenditures average not more than \$2,000,000 per month; and the State Relief Commission has, by formal resolution adopted at its

last meeting, so directed the State Relief Administrator. This action of the Commission is in line with the thought that these outlays should be considered current expenses; and that, as a matter of policy, the State should issue no more bonds for relief purposes."

If unemployment relief in California continues to be a major problem representing any substantial proportion of the present case load after June 30, 1936, the State's second \$24,000,000 will be wholly inadequate unless supplemented with other State or Federal funds. I am of the opinion that it would be wise to continue to cooperate with the Federal Government in meeting the problem. I have complied with the resolution of the Commission in restricting expenditures of State funds to \$2,000,000 a month but I now recommend that the State Relief Commission give careful consideration to the expenditure of State funds concurrently with Federal funds. I realize that legislative action is necessary but as a preliminary step I recommend that I be authorized to conduct negotiations with Governor Merriam, and the State Unemployment Finance Committee on Finance, with the object of making it possible to spend the entire \$48,000,000 concurrently with expenditures by the Federal Government and in equitable proportion.

13. "The whole problem seems to resolve itself around two propositions:

- (1) Will the Federal Government continue to grant to the State of California such sums as are reasonably necessary, in addition to the \$2,000,000 per month of State funds, to properly handle unemployment relief?
- (2) Shall California be allotted its full share of Federal relief funds, based upon case load, so as to permit approximately a 100% Federally financed program, such as now obtains in many other States?

Should point 2 be definitely determined at an early date, it is certain that grants under point 1 will be discontinued, or very severely curtailed. Should point 2 not be so determined at an early date, or continue along lines now obtaining, it is certain that for many months Federal grants to California will be re-

quired in substantial amounts. In any event, the State Relief Administrator and the State Relief Commission are jointly charged with the responsibility of determining what course of action is to be urged upon the Federal authorities."

All cases transferred from SERA to WPA will be paid for from Federal funds. If, and when, the entire SERA unemployment case load is transferred to WPA, theoretically at least, there will be no direct relief. We know, however, that this ideal condition cannot be realized, except as hereinafter provided under paragraph 23. It appears to be only equitable that the eligible cases remaining on work and direct relief with SERA, pending their complete absorption by WPA, be paid for from Federal funds provided, however, that the State's second \$24,000,000 be made available for use during the present fiscal year, as well as the \$24,000,000 now being used.

14. "Without any adverse criticism whatsoever of the present Administrative Officer, divergent opinions are held as to the advisability of maintaining the Works Progress Administration and the State Relief Administration under one and the same Administrator."

15. "One view is that the conduct of these two branches of relief work may involve apparently conflicting interests; and, regardless of his desires and purposes in the premises, the single Administrative Officer cannot satisfy both sides. It is thought that the State's chief relief officer must at all times be in a position to make strong and independent representations to Washington; keeping constantly before the Federal authorities its obligations and commitments to California and making clear those problems peculiar to this State. And in so doing, he must be able to make those representations without embarrassment and without conflict of interest. As a Federal officer, in direct administrative line from Washington, the Administrator may be unable to urge the State's viewpoint without ignoring orders or jumping over the heads of his superior officers."

16. "The proponents of the theory of continuing this dual administration hold that California has not the funds to maintain a separate State program, and that after all the interest of this State is merely to supplement the Federal program by contributing thereto the monthly sum of \$2,000,000. Therefore, there is nothing inconsistent—and, in fact, it is clearly advisable—for the same officer to hold both positions. It is felt that the two programs are just now so completely intertwined that it would be both difficult and expensive to separate them. In the natural course of events, all of the works activities will be in the hands of WPA by the end of the year—and possibly by the end of November—and to announce a separation of the two programs at this time would cause much adverse publicity without corresponding benefits."

17. "The proponents of separation agree that California has not the funds to supersede a Federal program but point out the following: Two apparently distinct programs are now to be followed (1) an employment program as far removed from direct relief as possible and as near as possible to conditions in private industry; and (2) a relief program which is intended to take up the slack of the above program precisely in ratio to its failure to function ideally."

18. "The separationists hold that Federal grants made to the Governor, to be expended by the State Relief Administrator under the guidance of the State Relief Commission, may continue as heretofore and that the Administrator for this purpose must be distinctly a State officer, working, of course, under regulations laid down from time to time by the Federal Emergency Relief Administration."

19. "There should, of course, be no antagonism between the two programs; one is naturally supplementary to the other. The only possible conflict is that opposing responsibilities now devolve upon a joint Administrator. That may prove embarrassing to the State and to the Administrator himself, and may result in injury to the program. In any event, should it be deemed advisable to have two

Administrators, one State and one Federal, the State officer should be one who is already thoroughly conversant with the work, entirely sympathetic with its objectives, and one who will at all times work in complete harmony with the Federal Works Administrator. He must be definitely persona grata to the Federal authorities as upon them devolves, in great measure, the responsibility for the complete success of the program."

(Combining paragraphs 14, 15, 16, 17, 18 and 19):

If, and when, the Works Progress Administration places all of the eligible unemployed at work in California, it is obvious that there will be no need for direct relief and for the organization that is now known as the State Emergency Relief Administration except in skeleton form. We know that it will be extremely difficult to eliminate entirely direct relief in some of the major counties. There will always be the cases that will require direct relief from the termination of one job to the client's assignment to another. Under the present regulations of WPA, it will be difficult to provide projects to absorb all the eligible unemployed but, if the modifications that have been requested are granted, the task will not be difficult. It is fair, therefore, to assume that we will place at work all of the eligible unemployed in California during the present year. We must, however, provide a safeguard in the form of direct relief so that there shall be no suffering in the State. I have suggested that we comply with the request made at the last meeting of the State Relief Commission held in San Francisco on July 27th, by Mr. William H. Leach of the American Public Welfare Executives Association, to turn over to the welfare departments of the respective counties all of our eligible employables that are unemployed and pay the counties for the cost of caring for them, pending the time the clients are put to work. The President has issued a mandate to the effect that we must and shall quit this business of direct relief. We are in the business of work relief. The counties' charities departments are, and always have been, in the business of direct relief. If we continue in the business of direct relief, there is duplication and unnecessary expense. I have

recommended strongly to Washington that we get out of the business of direct relief by turning over eligible ~~unemployables~~[?] over to the county welfare departments, pending the time they are placed to work, and that we reimburse the counties for such care. If that recommendation is accepted, the State Emergency Relief Administration organization will be liquidated during the present year, except for such skeleton staff as may be required to supervise direct relief by the county welfare departments. That is one very good reason for maintaining the two administrations under one head.

The transition of the work relief program from the SARA to the WPA can be effected much more expeditiously and economically by having the two administrations under one head. That is a second good reason for maintaining the two organizations in their present state.

20. "Just recently strong protests have been made, and should continue to be made, to the Federal Government in order that California may not be heavily and unfairly penalized. The State has been advised that Federal grants for general and transient relief purposes are being sharply curtailed. This policy, except that pertaining to transient service, seems justified at this time only as a direct result of, and in proportion to, the absorption of relief workers into the Federal program. Since the rate of acceleration of the work program, and its resultant absorption of workers, is in no sense dependent upon, or controlled by, any act of the State of California, any withdrawal of funds—other than as herein indicated—defeats the purposes for which relief funds were appropriated, and in effect nullifies unilaterally the understanding had between the State of California and the Federal Government. The California Relief Commission, under date of July 27, 1935, passed unanimously a resolution covering this matter and asked the State Relief Administrator to present the same, vigorously, to the Federal Government. Attention must also be called to the fact that the State of California has an extremely heavy

transient burden, provision for which must necessarily be made. During at least the latter half of the month of July, transients pouring into this State numbered more than 1,000 per day. We understand that the Federal Government purposes to return to their homes all transients coming into the State after August 1st, who have here no visible means of independent support. We trust that there may be no failure of this intention."

We understand that the transients are to be integrated into the WPA program. We already have plans under way for placing a substantial number of the transients at work on forestry projects. After all of the transients are placed to work under the Works Progress Administration, and particularly on Federal projects, the cost of their care will be paid wholly by the Federal Government, therefore, there can be no complaint. Pending the time that such is accomplished, it is correct to assume that the Federal Government should continue to appropriate funds to take care of the transients.

21. "One thing now seems clear: in the matter of current expenditures for unemployment relief, it is essential that the State continue to make proper representations to the Federal Government to the end that Federal appropriations will fluctuate without uncertainty or the unfortunate delays recently experienced, as the relief load may require and in direct proportion as the combined works activities increase or diminish."

I am thoroughly in accord with the contents of the foregoing paragraph.

22. "Of importance also is the necessity for careful gauging of the effect upon business in general of carrying on this large artificial spending program. Only by the most careful analysis can the State even attempt to predict what its problems will be after the present Federal program is completed. It is not to be

expected that the load will be so diminished at that time that it can be carried by the State alone."

I am in complete accord with the foregoing paragraph as evidenced by my response to paragraphs 14 to 19 inclusive.

23. "Perhaps the most important task now before this State is the necessity for developing its social program and administrative agencies so as to properly coordinate the social security program of the Federal Government with activities in this field within the State. Conditions cannot continue as at present. Administrative expense must be drastically curtailed. Direct relief, or the dole, must be cut to the very minimum both as to numbers and as to individual receipts. Every possible economy must be effected and the organization must be made as nearly ideally efficient as possible."

24. "The State Relief Administrator and the State Relief Commission are now confronted with the responsibility of determining whether or no the best interests of the State and of the unemployed not absorbed into the works program may best be served by the expenditure of relief funds through the present administrative organization."

25. "In the interest of economy and efficiency, and as a normal approach to a problem which must be assumed to be a continuing one for many months to come, already existing state agencies might be used as the instrument for the administration of State relief. This would require safeguards and regulations set up only after prompt but exhaustive study. The Commission might properly initiate a controlled survey and study of this suggestion. Investigating the facts, asking for recommendations from competent persons and, in general, determining the feasibility and practicability of the plan. Any such investigation should be prefaced with a limited agenda to include, among others, the following:—

- (1) The number of County Welfare Departments under charter or otherwise.

- (2) The standards of such County Welfare Departments.
- (3) The standards and efficiency of relief presently afforded.
- (4) The training and experience of workers participating in the local relief program.
- (5) Limitations of county charters affecting immediate operation of such bodies and their legal right and practicability to disburse State and Federal funds.
- (6) Conferences with the Attorney General's office as to legal limitations, charter amendments, enabling legislation, etc.
- (7) Tendency of local welfare departments to attempt to use State and Federal funds for unemployables and reluctance to assume responsibility therefor.
- (8) Survey of case load—present and anticipated.
- (9) Determining necessary numbers of workers, their availability by transfer from SERA and otherwise.
- (10) Changes in personnel, qualifications, organization, legislation, etc., required to enable existing or created State and local departments and boards of social welfare to efficiently act as the agencies for unemployment relief.
- (11) Attitude of the Federal Government in connection with such transfer."

26. "It is suggested that this survey be started at once and be conducted under the auspices of the State Relief Commission, through a committee of not more than three; that an executive secretary be appointed to take active charge of the work as a SERA project, in collaboration with the State Relief Administrator."

(Combining paragraphs 23, 24, 25 and 26):

I thoroughly agree that administrative expenses must be drastically curtailed and direct relief should be eliminated to the greatest extent at the earliest possible date. Orders have been given that administrative expenses throughout the SERA be reduced substantially and the reductions are occurring daily. It should be remembered that the cost of Social Service represents

about fifty percent of our administrative cost. In analyzing administrative cost reports it should also be noted that such items as material and equipment are included in administrative costs. In other words, the actual relief granted in the form of wages on work relief and checks representing budget deficiencies on direct relief comprise the total relief granted. All other expenses of every nature are considered as overhead or administrative costs. It is true that the cost of material and equipment is but a small fraction of the total cost of administration. Attention is called to this as an administrative item merely to show that the system of accounting we use is unusual as compared with private industry. Other items, of course, are included under administration in our accounting system.

So far as direct relief is concerned, I am unqualifiedly in favor of turning our unemployed employables over to the Welfare Departments of the counties pending the time they are placed at work as outlined more in detail on Pages 13 and 14.

26. We have on file in our Division of Research and Statistics a good deal of data suggested to be secured by the survey referred to in Paragraph 25. I agree that the plan for the survey is an excellent one and it has already been started. It is estimated that not to exceed thirty days will be required for its completion.

27. "Some definite policy should be evolved as soon as possible. In any event, the State must prepare itself to administer to a load which cannot, in the very nature of things, be provided for by existing and contemplated employment activities. It must, in so far as possible, set up a work program of a character which will lend itself to that type of persons who will inevitably constitute the residue, after regular employment activities are in full swing."

A work relief program for border-line cases has been the subject of discussion ever since the SERA program was initiated. We have tried out the

Community Gardens and other projects requiring light work on the part of men and women, but without great success, except the relief clients received a check for work done instead of a budget deficiency check. A program of this nature was recently proposed for Imperial County. It was merely a make-shift that would enable the recipient to receive a work relief check instead of a budget deficiency check. The cost of production on projects of this type is immeasurably out of reason and leads only to violent criticism of the program. I agree, however, there will be a large number of such cases that cannot be deemed to be one hundred percent unemployable and it is up to our ingenuity to devise useful projects to absorb them. In the case of manual workers, and they form the great majority, we have not yet developed projects that I deem useful, but we shall continue our endeavors along that line.

26. "With such information available, the State Relief Administration may then plan, with Federal and local governments, for those necessities which must inevitably follow termination of the Federal spending program. The Commission may then make such conservative recommendations to the Legislature as its investigation and experience may indicate; and the Legislature of this State has good right to expect the guidance of this Commission."

We have in our files valuable data collected under the direction of Dr. Jeter, one of the most eminent Social Workers in California; similar data gathered by the California Conference of Social Work, and by a Committee of the League of Women Voters. In addition thereto we have a vast store of data in our files collected by our field representatives and their assistants. When the Fact Finding Survey referred to in Paragraph 25 is completed it is recommended that a research and statistical project be authorized under WPA to consolidate all information that we now have and to secure the balance that will be necessary in order that the State Relief Commission may be in a position to

submit its recommendations at the next session of the Legislature which is anticipated for December of this year or January of next year.

In conclusion it is a pleasure to state that Mr. Ralph E. Jenney, Chairman of the State Relief Commission, has presented the essential features of our relief program in an excellent manner, particularly those that require attention at this time. The comments I have made are intended merely to elucidate several points, the principal ones being:

- (a) Financing the unemployment relief program;
- (b) California's equitable proportion of the \$4,000,000,000;
- (c) SEPA and WPA under one Administrator; and
- (d) Transferring eligible unemployed employables to County Welfare Departments.

Frank Y. McLaughlin
Administrator

Personal

August 16, 1935

Mr. Robert H. Minckley
Assistant Administrator
Works Progress Administration
c/o Mayflower Hotel
Washington, D. C.

Dear Mr. Minckley:

Mr. Ralph E. Jenney, Chairman of the State Relief Commission, mailed you a statement August 12th, consisting of nine pages, which outlined his views on several vital issues concerning unemployment relief in California. I discussed the whole matter with Mr. Jenney during an eight-hour conference in San Francisco on the 12th. I told Mr. Jenney I would go over the statement carefully and give him my views on the principal subjects. There will be sent you with this letter a document consisting of 20 pages which contains my comments, paragraph by paragraph. Mr. Jenney and I are substantially in accord on the principal subjects and I believe after our meeting in Los Angeles or San Diego on Sunday, August 18th, we will be seeing eye to eye on all the major issues.

In brief, the nine page document may be summarized under the following captions:

- A. Financing the unemployment relief program;
- B. California's equitable proportion of the \$4,000,000,000;
- C. SERA and WPA under one Administrator; and
- D. Transferring eligible unemployed employables to County Welfare Departments.

A. Financing the Unemployment Relief Program:

The total cost of unemployment relief in California from January 11, 1933 to June 30, 1935 was \$177,694,451, of which \$112,707,361 (or 63.5%) was financed by the Federal Government; \$26,400,190 (or 14.8%) by the State Government; and \$38,587,100 (or 21.7%) by the Local Governments.

Last spring when Governor Harris decided tentatively upon a \$48,000,000 contribution to the unemployment relief program for the current biennium it was assumed that the \$4,000,000,000 Federal fund would also be spent over the current biennium. Subsequently the Federal policy changed and it was decided to spend the entire \$4,000,000,000 during the present fiscal year. I maintain it would be only equitable for the \$48,000,000 provided by

the State to be spent concurrently with the Federal funds.

I have recommended to Mr. Jannay and will recommend to the State Re-

lief Commission that I be authorized to conduct negotiations with Governor

Hertan and the State Unemployment Finance Committee with the object of in-

roducing legislation at the coming special session of the Legislature which

will be held sometime in December or January that will make available for the

State Relief Commission and the Administrator the \$24,000,000 provided for the

next fiscal year. If Governor Hertan and the State Unemployment Finance Com-

mittee agree in principle, there is no reason why we cannot get a larger alloca-

tion than \$2,000,000 monthly from the present allocation. If, as Mr. Jannay

anticipates, a substantial unemployment relief program will have to be con-

ducted during the next fiscal year and if, as is now contemplated, all present

Federal funds will be exhausted by the end of the present fiscal year, the

second \$24,000,000 of the State fund would be woefully inadequate and a proper

unemployment relief program could not be financed without the aid of the

Federal Government.

The foregoing are my reasons for recommending that the \$48,000,000

State fund be spent concurrently with the \$4,000,000,000 Federal fund.

B. California's Suitable Proportion of \$4,000,000,000

California, having approximately 7% of the relief load, is - as

Mr. Jannay indicated - entitled to receive about \$280,000,000. I have, however,

asked Mr. Jannay that I have agreed with the Federal authorities that it shall

be my objective to develop sufficient projects to place the entire case load

of 290,000 men and women to work as long as the money lasts. Based on the

present allocations the fund would be exhausted some time in February if the

entire case load of 290,000 were put to work. I also told Mr. Jannay that I

felt reasonably sure, if we could develop enough projects to put the entire

case load to work and we exhausted the present allocation of \$202,000,000 some-

time in February, that other funds will be made available to carry on through

until the end of the fiscal year. With such an agreement I consider that we

have the equivalent of our allocation based on case load, which is 7%, instead

of on population which is about 5%.

C. FMA and FMA under One Administrator

My contention is that the FMA Work Relief Program can be integrated

into the FMA program more expeditiously and economically under the direction of

one Administrator than under two. FMA must be looked upon as a standing or-

ganization that can and will be closed out by the end of the present year, and

adding sufficient projects are developed to absorb the entire unemployment and

to take care of the essential direct relief for all those unemployed by trans-

fering to the County Welfare Departments. It is being demonstrated in this

office very day that this is true.

August 16, 1935

**B. Transferring Eligible Unemployed Employables to
County Welfare Departments**

I am thoroughly in accord with Mr. Jenney. I believe arrangements should be made as soon as possible to enter into an agreement with the various counties in the State to take over our eligible unemployed pending the time they are placed to work, the counties to be reimbursed for the expense of course.

I told you over the telephone that I was in complete accord with Mr. Jenney and that is true. The object of my writing a detailed statement, commenting on Mr. Jenney's statement paragraph by paragraph, is to provide him with ~~spideas~~ ideas in detail. I expect to meet Mr. Jenney in either Los Angeles or San Diego on Sunday, the 18th, and go over the whole situation with him.

Also I expect to meet Governor Merriam in Los Angeles or Long Beach tomorrow for the purpose of discussing the expenditure of the \$48,000,000 State fund during the present fiscal year. I expect to see Mr. Lipsitch and Mrs. Workman as well.

I realize from Mr. Aubrey Williams' wires that the situation must be pretty difficult in Washington; and I feel I can work this matter out here with the Governor, the State Unemployment Finance Committee (of which I am a member), Mr. Jenney, and the State Relief Commission.

Yours very truly,

Frank I. McLaughlin
Administrator

FIMcL:W
cc Regional Office, SF

Airmail
Special Delivery

First Lady Acclaimed In Lecture on 'Youth'

By CAROLINE WALKER

Mrs. Franklin Delano Roosevelt, the first lady of the United States, today had a warm memory of receiving one of the greatest ovations ever accorded a lecturer in Southern California.

Last night, under the auspices of the Pasadena Teachers' Association, Mrs. Roosevelt spoke on "Youth Problems" to a great audience in the Pasadena Civic Auditorium, and every man and woman in the audience rose to do her honor.

As simply as though she were chatting over the tea-cups in her own drawing room, Mrs. Roosevelt told her audience....

That if youth can find no place in his community, civilization is at an end;

That youthful pledges not to defend one's own country are foolish;

That trying to understand why another nation goes to war, even if we don't approve, may keep our own nation out of war.

That the problem of criminal youth can be solved only by providing recreation as well as occupation.

That youth should be advised that any job, even scrubbing a floor, is worth doing well, and, if well done, may mean promotion.

SPLIT INFINITIVES

Mrs. Roosevelt split her verbal infinitives with the same calm disregard she sometimes evinces for social conventions. She referred to young people as "kids" on a number of occasions. She criticized many schools for not changing their system of education to meet a changing world.

But an audience preponderantly pedagogic approved it all.

Impeccably clad in a gown of filmy black lace, circled at the waist with a broad metallic band, she demonstrated anew the amazing vitality with which she meets not only the duties of being the first lady but of carrying

tion is the greatest lesson that can be learned between people and between nations.

"Youth today, as in all generations, wants to know how to earn a living so that it may marry and begin the business of living, how to enjoy life, and what can be done about war," she said.

"But youth faces a more complicated world than we did. We were always near older people who said 'Do' or 'Don't,' but youth of today must decide things for itself. We must develop more independence in them, more responsibility.

"We must teach them, not just to obey, but to decide what is right and what is wrong for themselves, and to be able to make themselves do what is right.

"This generation is a more thinking generation than ours, more honest, and faces facts more frankly—probably because it is told the facts more than we were."

She criticized schools for not keeping step with a changing world, and preparing young people for the sort of life into which they must go.

"Vocational guidance is not the answer," she said. "For some young people vocational classes can do nothing. We must begin to study their aptitudes when very young and never force them to do things for which they are not fitted and in which they cannot be happy—just because we think it best.

"Vocational classes in the schools often have no practical

(CONTINUED ON PAGE 215)

ACCLAIM FIRST LADY IN LECTURE

(CONTINUED FROM PAGE THREE)

value, and men in industry prefer to educate employees in their own schools. Industry and schools should get together to establish vocational classes that will really teach skills and good work habits, like concentration and sticking to the job.

"Youth is not a lost generation. We must use all of our imagination to find ways in which youth can be useful to the community—but youth must also use imagination and initiative.

"If ever we say that there are no jobs for youth, no place for youth, we say that civilization is at an end, for tomorrow depends on youth. We are not ready to say that in this country."

In urging increased recreational facilities, particularly as a preventive to crime, Mrs. Roosevelt also urged a return to the old custom of young and old having good times together.

"Fun shared together keeps the older people young and lets them know what youth is really thinking," she said. "It gives youth the benefit of its elders' experience in the casual way that comes from sharing good times."

Asked what advice should be given a young man starting out to find a job, she replied:

"I would say to him, take any job you think you can do. Do it to the best of your ability, not just with the spirit of getting by. The thing well done, even though it is only scrubbing a floor, nearly always leads to something better."

Mrs. Roosevelt stated that in her opinion more young people are interested in the subject of war than in any other topic.

"We have not done much in solving the problem ourselves," she said. "But if we do not allow

APPENDIX G

ourselves to think bitterly of any nation, even if we disapprove of what it does; if we recognize the fact that other nations have temptations we do not have, if we keep an objective attitude, we will not rush our own nation into war.

"If we settle our own difficulties by reason, not force, we may be able to establish such settlement, some day, among the nations.

"I believe the reason some of our young people take a pledge never to bear arms, even in defense of their country, is because that pledge is the only concrete barrier against war offered them. Such a pledge is foolish. I don't believe in promising anything when you don't know the exact circumstances in which you may have to redeem that promise."

"I believe that most of our boys and most of our girls today would defend their own country should the need arise."

Tonight Mrs. Roosevelt will speak on "Peace" at the Shrine Auditorium under the auspices of the Modern Forum; tomorrow night she will speak at Long Beach and then will go north to Sacramento and to Seattle for other lectures.

Mrs. Roosevelt Sees Los Angeles

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Mrs. Franklin D. Roosevelt, wife of the President, is shown today during her tour of Los Angeles, which she saw in company with National Youth Administration officials. Left to right, A. M.

Yale, supervisor of Area 11, Los Angeles for N. Y. A.; Ann Treadwell, state director of N. Y. A., and Mrs. Roosevelt. The "First Lady" inspected nearly a score of government relief projects during the day.

Whirlwind L. A. Tour

First Lady Inspects Work Projects Here

A flying visit was paid today by the nation's First Lady to various government work projects.

And in case there should be any doubt about it being a flying visit, she inspected five projects in widely scattered sections of the city in an hour and a half.

As Eleanor Roosevelt, lecturer, mother, writer, business woman and radio personality, she has her own world of interests.

But as the wife of the President of the United States she is interested in how the various alphabetical agencies of the government work in the Southland.

VIEWS FIVE PROJECTS

So Mrs. Roosevelt left the Biltmore on a whirlwind tour that included inspection of five projects and conferences with a score of executives—all in the hour and a half, as she saw how the taxpayers' dollars are spent.

Mrs. Roosevelt, already an honorary Los Angeles citizen, was accompanied by three California executives of the National Youth Administration as she sped from project to project in a high-powered auto with a special escort.

But first she and her husband observed their thirty-third wedding anniversary, which is today, in a long distance telephone conversation with the President from the White House and Mrs. Roosevelt from the Los Angeles Biltmore hotel.

Then she began the tour of inspection.

TOUR PARTY MEMBERS

Those on the whirlwind tour with the First Lady, who was made an honorary citizen of the county yesterday by the Board of Supervisors, were:

Mrs. Ann DeG. Treadwell, state director of the National Youth Administration; Maurice Mandell, state supervisor of works projects for the National Youth Administration, and A. M. Yale, supervisor of Area 11, Los Angeles county, for

the National Youth Administration. Following is the hour and a half log of their inspection:

9:55 A. M.—Biltmore Hotel—Party departs.

10:15 A. M.—Macy Street School, 716 North Avila street—Mrs. Roosevelt arrives with group and begins inspection of workshop project, co-sponsored by the Los Angeles Recreation Department. Instructors explained how furniture and equipment is made for various playgrounds.

10:25 A. M.—The First Lady begins inspection of the sewing projects, located on the same property, and hears how gowns are made for the Los Angeles County Hospital, clothing for the County Poor Farm and costumes for the playground department, under sponsorship of the Board of Supervisors.

10:40 A. M.—Mrs. Roosevelt finishes the inspection and gets in the auto with her party and whisks off with the speed and grim determination of a G-man raiding party.

POSES FOR PICTURE

"I've got to finish this trip, you know," she told newsmen who pursued her as she dashed about on the inspection tour just before she got into the auto. "All right, I'll pose for one picture, but I've got to hurry."

11:05 A. M.—The First Lady arrives at the McKinley Center, Forty-first street and McKinley street, to examine a hothouse project that grows flowers and shrubbery for the Los Angeles city schools. Time for the more than eight miles across heavy downtown traffic—20.5 minutes.

11:10 A. M.—Mrs. Roosevelt completes inspection of McKinley Center and begins that of the Vernon Avenue Nursery School at 1020 East Vernon avenue, several blocks from the McKinley Center.

"I like the National Youth Administration set-up here," said the First Lady. "I like it very much, but I've still got to complete my trip by 11:30 a. m. in

order to get back to the Biltmore by noon."

11:15 A. M.—Mrs. Roosevelt completes the nursery inspection and departs for the art project at Jefferson streets, nearly four miles away.

11:22 A. M.—Mrs. Roosevelt was dashing up the steps of the project with her inspection party. Here she quickly learned, as 11:30 a. m. approached, that the project, sponsored by the Los Angeles Council of Social Agencies, makes posters for charitable organizations and campaigns.

11:30 A. M.—She made it!—Whew!

Before driving back to the Biltmore, Mrs. Roosevelt said:

"You may say that what I have seen pleases me very much. I like the Los Angeles administration of the projects."

STATE ADMINISTRATOR DISSATISFIED WITH LOCAL SET-UP

Youths Remaining At Camp Will Be Returned Home

The National Youth Administration resident project, located for the past six months at Hermosa Beach, will close August 15th; it was announced today by Anne deG. Treadwell, state administrator.

Aubrey Williams, federal administrator of the NYA, after visiting the project early in July, made the following statement: "The only possible criticism that I can make of the project is that its location necessarily confines the program to the narrow limits of the hotel, or else exposes the youths to all the influences of the town with which they are too closely surrounded. This factor alone makes it necessary for me to conclude that unless more suitable facilities can be found we must abandon this type of activity in the Los Angeles area. The staff of the project is to be commended warmly for the wholesome spirit which prevails and for the earnest application of the young people to their work."

Vocational Experience

The project has provided vocational experience for unemployed young men and women from various parts of the state in the fields of building construction, woodworking, electricity, metal and mechanical trades, textiles and clothing, commercial art, health service, clerical work, and printing and publishing, through the co-operation of the public agencies of Los Angeles county. Class work has been provided through the public schools of the county. A health program has resulted in gains in weight for a large number of enrollees.

In all, 570 young men and women have been in residence during the

life of the project. Of these, 80 have already left to accept private employment, and an additional number are now prepared to assume beginners' jobs as auto mechanics, clerks, hotel workers, etc. All youths remaining on the project will be returned to their homes by the NYA on August 15th.

The search for other quarters has been in progress ever since the establishment of the project at Hermosa Beach, but so far suitable facilities have not been discovered elsewhere in the county.

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**HIGH AND
LOW TIDE**
By John J. Berry

The announcement is made that the National Youth Administration resident project, located for the past six months in Hermosa Beach will be closed on August 15. Federal Administrator Aubrey Williams in the announcement states that the only possible criticism that could be made of the project is that its location necessarily confines the program to the narrow limits of the hotel in which it is stationed. The advisory committee members composed of 15 from Southern California, who have been of such help to the officials, have received a letter this week from Anne deG. Treadwell, administrator of San Francisco, advising of the early closing of the project and thanking them for the time and attention given by them in the work. The South Bay members of the committee are: Robert E. Meacham, Dr. R. Paul Husted and Rev. Vernon H. Cowser.

Hermosa Youth Hotel To Close on Aug. 15

The National Youth Administration's resident project in the swank Surf and Sand Club at Hermosa Beach, which aroused such a storm of controversy in the beach community, will be abandoned on Aug. 15, it was disclosed.

Some 400 youths of both sexes, between the age of 19 years and 25 years, will be sent to their homes.

Residents of the beach community at the time of the establishment of the project some six months ago

campaigned against it on grounds it would destroy real estate values along the strand, and later they complained of the moral conduct of enrollees.

But in the announcement of the abandonment plans Anne de G. Treadwell, state N. Y. A. administrator, quoted Aubrey Wil-

liams, Federal N. Y. A. administrator of Washington, as saying:

"The only possible criticism I can make of the project is that its location necessarily confines the program to the narrow limits of the hotel or else exposes the youth to all the influences of the town, with which they are closely surrounded.

"This factor alone makes it necessary for me to conclude that unless more suitable facilities can be found we must abandon this type of activity in the Los Angeles area.

"The staff of the project is to be commended warmly for the whole-some spirit which prevails and for the earnest application of the young people to do their work."

Before deciding on abandoning

the Hermosa project Williams flew here and conferred with an advisory Los Angeles committee consisting of Rabbi Edgar F. Magnin, the Rt. Rev. Msgr. Thomas J. O'Dwyer, Dr. Remsner D. Bird, president of Occidental College; Mrs. Irene T. Heineman, assistant superintendent of public instruction for the state of California, and Ed Hoyt, director of attendance for the Los Angeles city schools.

The committee made a report of facts, did not specifically recommend abandonment of the project, considered briefly the morals charges that have been raised against conduct of some enrollees of the project, but made no recommendation on this because of lack of evidence, it was said.

Some Hermosa Beach residents

who were opposed to the project had told of reports of wild parties by enrollees and of asserted misconduct by some officials. However, the advisory committee declared that, although it had invited the complaining persons to come forward with proof, they had failed to do so. Committee members further said some enrollees had been questioned but had denied any such events and attributed the reports to a few enrollees who had been irked over dismissal for cause.

NATIONAL YOUTH AGENCY TO EMPLOY 55,000 MORE BOYS AND GIRLS

WASHINGTON, July 21.—The National Youth Administration, which recently was divorced from

the W. P. A. and given funds, moved yesterday its part-time employment to another 55,000 boys a-

APPENDIX J

July 31, 1939

Mr. Sheridan Downey
United States Senate
Washington, D.C.

Dear Senator Downey:

For the past year I have served on both the state and the local advisory committees of the National Youth Administration for this area. I have just learned with surprise of the requested resignation of Mrs. Treadwell, State Director, which I understand was based on the grounds that a satisfactory program was not being maintained in the state. This does not conform with either my experience with the program as we have participated in it locally or with the information I have had from wide contacts throughout the state.

My purpose in writing you has no connection with the removal of Mrs. Treadwell--I am assuming that that is a definite and accomplished fact--but as a school man greatly interested in what happens to the youth of our state, I am concerned that a good program should not be wrecked either through unfamiliarity of the National Administrator with the local situation or through a misunderstanding on his part as to the true situation. I am therefore writing you to see if you might not interest yourself in the matter to the extent of urging Mr. Williams to not make further changes in the state set-up until he has had a fuller opportunity not only to study the operation of the National Youth Administration here but to sound the sentiment of the school people relative to the program.

I may say to you that in every respect we have found the program most effective. The state office has been highly cooperative in meeting the relief problem so far as funds were available; they have been prompt and effective in handling situations referred to them, and have insisted on projects which would insure good training and work attitudes on the part of students rather than an attitude of merely accepting a dole.

Mr. Sheridan Downey--2

July 31, 1939

May I assure you of my personal appreciation of any attention you may be able to give to this matter under the pressure of these closing days at Washington. However, I have written you because I am aware how useless it is to wait until it is too late to do anything.

Very sincerely yours,

Leo M. Baisden
Assistant Superintendent of Schools

LBB:MM
c--Aubrey Williams

COPY

July 31, 1939

Mr. Aubrey Williams, Administrator
National Youth Administration
Washington, D.C.

Dear Mr. Williams:

The enclosed copy of a letter to Senator Downey is self-explanatory. My reason for addressing the matter to him, as you may understand, is that I know him personally and know, of course, of his interest in all matters vitally affecting us here in California.

During the past year, as a member of the state and local advisory committees of the National Youth Administration, I have devoted a good deal of time and energy to trying to help in the organization of an effective program for this state. While I am aware that all of these relief programs have certain disadvantages and do not please everyone, I can assure you that almost without exception the school people with whom I have come in contact have been pleased with the program as heretofore administered. We have felt that it has been free from petty politics, that schools received consideration fairly in proportion to their needs, and that the type of projects required were such as would maintain a satisfactory working morale among students rather than the mere acceptance of a role.

I have talked with a considerable number of school people since the announcement of the change in the state directorship, and I can assure you that we are all frankly concerned about the program. Naturally any move at this time becomes interpreted as a political move related to the national political situation. We are of course hopeful that this is not the case and that the present change does not foreshadow other moves to bring the National Youth Administration group more strongly in line politically without regard for the service functions involved.

You will understand that that I am saying is in no way a protest with regard to your action in

Mr. Aubrey Williams--2

July 31, 1939

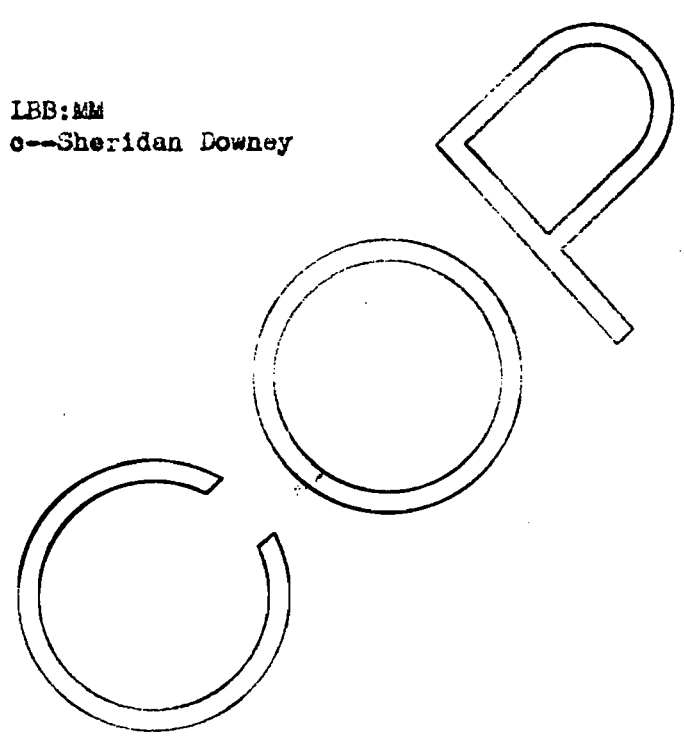
changing the state directorship, which I assume is a matter entirely and rightfully within your province, but I do want to urge that you do not make further changes in the state set-up until the director has had full opportunity to study all angles of the situation and to acquaint himself with the attitude of the school people so far as the school program of the National Youth Administration is concerned.

Very sincerely,



Leo E. Baisden
Assistant Superintendent of Schools

LBB:MM
cc--Sheridan Downey



Sacramento City Unified School District

Chas. C. Hughes
Superintendent and Secretary

Sacramento, California

July 31, 1939

Mrs. Anne deG. Treadwell
795 Sutter St.
San Francisco, California


Dear Mrs. Treadwell:

The enclosed letters are self-explanatory. I have also talked on the telephone with Dr. Jacobsen, Clarence Argo and Earle Crawford. They have all promised to telegraph Aubrey Williams. I find that Aubrey Douglass is teaching at the University of California at Los Angeles. His residence address is 275 W. Tenth Street, Claremont, California. Possibly one of your southern men could get in touch with him. I tried to get L.P. Farris on the telephone but found that he was out of town, and I am writing the following people suggesting that they telegraph:

Jerre Hurley, Dist. Superintendent of Schools, Yreka
George I. Badura, Principal of High School, Fortuna
Charles Geer, Coalinga
Forrest Murdock, Principal of High School, San Jose
Mrs. James K. Lytle, State President of P.T.A., Los Angeles

You will be pleased, I know, to find that each of the men with whom I have talked has been as shocked and surprised as you were at Williams' action, and I only hope that our activity may be in time to stop any further depredations. I should be interested in learning of developments as rapidly as they come along.

Cordially,



Leo B. Baisden
Assistant Superintendent

LEB:MM
Enclosures

VICE-PRESIDENT
MAE T. WRIGHT
1209 PRESTMANN ST.
BALTIMORE, MD.

223
PRESIDENT
VIVIAN OSBORNE-MARSH
2535 GRANT STREET
BERKLEY, CALIFORNIA

APPENDIX K

SECRETARY
EDNA M. KINCHION
941 IRMA STREET
FORT WORTH, TEX.

DELTA SIGMA THETA SORORITY

GRAND CHAPTER

TREASURER
MARIAN PALMER-CAPPS
BOX 28
HAMPTON INSTITUTE, VA.



JOURNALIST
MARY LOU ROBERSON
4309 I-2 HOOPER AVE.
LOS ANGELES, CAL.

Office of President

Washington, D.C.

Aug 25 - 1939

Confidential

Dear Mrs Treadwell:

Here in Washington I have been given a tip that someone in California who desires my job has written Aubrey Williams, attempting to make him believe that the people in California are dissatisfied with my work on N.Y.A. and that I am going thru the state running down the new deal and "campaigning for the Republicans." This is all so unjust and a terrible lie.

Williams has instructed Hull to investigate and talk with me. I won't be back in the office until Sept 2th.

Mrs Bethune is in New York, but I

VICE-PRESIDENT
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1209 PRESTHANN ST.
BALTIMORE, MD.

PRESIDENT
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SECRETARY
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LOS ANGELES, CAL.

Office of President

- 2 -

have been informed that she is strongly for me. It has been suggested that I contact you and obtain a written statement as to the type of work that I am rendering on the program, to have this handy when Lull comes to see me.

I am writing asking if you will be kind enough to give me this. I worked for Tolson and other Democrats and am also asking them for statements to this effect.

Will you mail a recommendation of me to me at my home

2838 Grant St, Berkeley, Cal.

We miss you very much at the office and we wish you continued success and happiness.

Yours sincerely H. . .

September 1, 1939

Mrs. Vivian Osborne-Marsh
2838 Grant Street
Berkeley, California

My dear Mrs. Marsh;

This will acknowledge with much appreciation your recent letter which I have read with great interest.

I have also been glad to hear of your trip to the east, and hope that it was a pleasant and satisfactory journey in every way. I am sure that Mrs. Rothuno was delighted to see you.

May I take this opportunity to express to you once more the hearty commendation which I have always felt your work with the National Youth Administration merited most richly. My association with you in this work has been one of the personally gratifying experiences upon which I now look back with especial pleasure, and I am fully conscious and most appreciative besides of your very real contribution to the program. You know how important to the N.Y.A. the better understanding and handling of the problems of minority groups is. I feel that you have consistently helped us to realize effectively this and other important objectives which were outlined at the time that the President created this agency.

I should be so happy to have the opportunity of seeing you at any time in the future, and send you my hearty good wishes for continued success and happiness in your work.

With all good wishes,

Very sincerely yours,

September 1, 1939

My dear Vivian,

You will find the enclosed letter a trifle stiff and formal, but I think it had better be that way. Since the things said in it are all entirely true, you are of course at liberty to use it in any way that you see fit. I feel however, that for your own protection, I should tell you that Lull has no particular use for me, and in fact did more than anyone else, so far as I can find out, to bring about my own difficulties. I can tell you also that he has never been very favorable to the idea of a Division of Negro Affairs, so that if the matter is really in his hands, and everything out here seems to be these days, I can't tell what he may do.

I suggest strongly that you see Mr. Carr or and tell him the story, as I am sure that if there is actually any danger, he will have some good ideas. I haven't heard anything that would lead me to believe that anyone is out for your job, but one never knows, and you're quite right to take every precaution.

I do hope that everything goes well. Let me know any time you think I can do anything for you.

Always most cordially,

TO ALL NYA EMPLOYEES:

October 18, 1940

In order that you may be fully cognizant of the details of the Mandell case, there is reproduced below a letter from Mr. Henry Rhine, National Office, U.F.W.A., to Mr. Aubrey Williams.

October 1, 1940

Mr. Aubrey Williams, Administrator
National Youth Administration
Washington, D. C.

Dear Mr. Williams:

Mr. Maurice Mandell, a member of Local 10, United Federal Workers of America, has been informed by you of his dismissal, effective October 1, plus accrued annual leave.

Our investigation of Mr. Mandell's work record and of the circumstances surrounding his dismissal developed the following significant information:

Mr. Mandell's Work Record

Mr. Mandell was appointed Director of Work Projects for the California NYA in April, 1937. In August, 1939 he became Deputy State Administrator, and six months later he was appointed by you as National Director of the Division of Work Projects of the NYA.

Because of the restrictions imposed by Section 10B of the Reorganization Act, it was not possible to adjust his salary in accordance with his increased responsibilities. As Director of Work Projects for the national program of the NYA, he was, therefore, receiving a salary of only \$3000 a year although performing work regularly compensated at a base rate of \$6500 a year.

That Mr. Mandell's record of loyal and efficient work in his position in California was excellent is unquestioned.

In Washington, as Director of Work Projects, he was several times commended by you for his generally excellent work and other members of the NYA staff were told by you that he was doing a splendid job. We know of no specific criticism made by you to him about his work or about him in any other regard during his service here. During the last three months, since his removal by you as Work Projects Director, several of the Regional Representatives have requested his assignment to help them or have indicated their interest in such an assignment. Although you refused these requests, they attest further to the high regard for his ability held by other members of the NYA staff.

In summary, the high caliber of his work and his devoted efforts to the Youth Administration were recognized and appreciated.

Mr. Mandell's Dismissal from the Service

In spite of this demonstrably outstanding work performance, Mr. Mandell was informed by you on June 25th of his removal, effective June 26th, from the position of Work Projects Director and his assignment as Special Field Representative. The character of this assignment is sufficiently clear from the fact that he was given no office, stenographic or other facilities in the Washington office despite the requirement that he make that office his headquarters, nor was he assigned any duties or tasks to perform by you. Your letter, removing Mr. Mandell as Works Director, informed him that he was to work with Mr. Stewart Campbell. The nature of this work was not specified at any time either to Mr. Mandell or to Mr. Campbell, and when Mr. Campbell requested of you on several occasions that Mr. Mandell be permitted to work with him as Assistant Regional Representative in the Regional Office at Cleveland, you denied the requests, pending the outcome of the FBI investigation of Mr. Mandell.

Your letter of removal gave as a reason for the change in Mr. Mandell's status the "necessity of placing in charge of all branches of our work people with the technical background that is required by the specific and particular work." No basis is given for holding Mr. Mandell not technically qualified to act as Works Director. Since the whole of his three and one-half years employment with the NYA, including the six months he spent as Deputy State Administrator in California, was primarily devoted to the supervision and operation of work project activities, it is difficult to believe that it was lack of an undescribed and unspecified technical background which occasioned his removal. Belief is subjected to still further strain when your letter of removal brings up the reopening of charges of communism against Mr. Mandell and goes on to say that the continuation of his services would depend upon "first, the results of the FBI investigation, and, second, (his) attitude toward this administration."

Mr. Mandell had previously been informed by you that you were requesting the FBI to investigate charges that he was a Communist, and he joined you in making this request. This was done despite the fact that a Committee appointed by you, with Father O'Dwyer, who had originally been active in pressing the charges against Mr. Mandell, as Chairman, had in September, 1939, made an investigation of the same charges and had completely exonerated Mr. Mandell, testifying indeed, to his devotion and work in the NYA.

One further point with respect to your removal of Mr. Mandell. This removal was made effective June 26th, just four days before he was to have been reclassified to his proper salary grade of \$6500, in accordance with the expiration of the restrictions of the Reorganization Act as they applied to him.

On September 13th, Mr. Mandell called your office and was informed by your Secretary that the FBI report had been sent to you about ten days before. He asked her for an appointment with you to see and discuss the report and to make a final disposition of his case. He was informed by her after an interval of two hours that you were not privileged to reveal the report to him because it was confidential and that you would be too busy for an indefinite period of time to see him.

The following day, September 14th, Mr. Mandell received a letter from you dated September 11th, notifying him that he was being dismissed as of October 1st. In this letter you stated that you had studied the FBI report and had been unable to arrive at any satisfactory conclusion as to his alleged membership in the Communist Party and that you had therefore set consideration of this question completely aside. You went on to say that because of his work record in the Washington office you had "decided that it is for the best interest of this administration" that his employment be terminated.

At this point reference must be made to your letter of June 25th removing Mr. Mandell as Works Director, in which you said that continuation of his services would be determined by the FBI investigation and "his attitude toward this administration."

On September 14th you wrote Mr. Mandell that you had been advised by the FBI that the report on Mr. Mandell was confidential and that you were "not at liberty to give it out." Mr. Mandell, on the contrary, was informed by the FBI that while its files were confidential and it could not make the report available, you, as the head of the agency to which the report was made, could exercise administrative discretion to make whatever use of the report the situation required. This clearly indicates that it was within your power to discuss the report with Mr. Mandell and to permit him to see it, particularly in view of the fact that the report had been jointly and voluntarily requested by both of you.

On September 20th, you addressed still another letter to Mr. Mandell in which you stated unequivocally that "I am happy to tell you that the recent report of the Federal Bureau of Investigation regarding your alleged Communist Party membership reveals no conclusive evidence or proof of such membership." You stated further that it had been impossible to hold Mr. Mandell's position open for him pending the outcome of this investigation and that accordingly he was to be terminated on October 1st. You added that he might use your name as a reference for his work with the NYA.

A recapitulation of your various letters reveals a curious confusion of contradictions. Each of the different letters has given a totally different reason for Mr. Mandell's termination. In the first instance, he was removed as Director of Work Projects allegedly for lack of technical background for the position, although his entire career in NYA was concerned with work projects direction. He was given a new title without functions to perform and without even a desk at which to sit. His continuation with the NYA was to depend upon the outcome of the FBI investigation and a determination of his "attitude toward this administration."

In the second instance, the FBI investigation having resulted inconclusively, he was to be dismissed because his work record in Washington made it for "the best interest of this administration."

In the third instance, you were "happy to tell (him) that the recent report....reveals no conclusive evidence or proof of such (Communist Party) membership" but that "it was impossible to hold open (his) former position or any comparable position in the event, which happily has transpired, of (his) clearance of the charges mentioned...." Accordingly, he was to be terminated on October 1st.

It seems evident that Mr. Mandell was removed as Director of the Works Division because charges of communism were brought against him and the implication is clear that both this removal and his subsequent dismissal were made merely because of the charges themselves and without regard to their truth or falsity.

It is further clear that neither Mr. Mandell's work record nor his technical qualifications for the job he held nor his "attitude toward this administration" were at any time an actual basis for your action.

We ask, therefore, that Mr. Mandell's termination be rescinded and that he be reinstated to his former position as Director of the Division of Work Projects or to a position of comparable status, at a salary equal to the one he should have gotten as Works Director.

A final special word needs to be added regarding the charges that Mr. Mandell is a Communist. He has now twice been cleared of these charges. It is clearly necessary for his own protection that he be permitted to see the report of the FBI investigation. We feel this to be essential not only so that Mr. Mandell may protect himself but so that no precedent for such un-American and star-chamber investigations be established. We therefore ask that he be given this right.

This request is apart from and without regard to any decision that may be reached on his reinstatement to his former position.

We are sure that you will agree that this whole matter should be cleared up as soon as possible, and we shall appreciate hearing from you as soon as possible regarding our request for reinstatement.

Very sincerely yours,

/signed/ Henry Rhine

Since Mr. Williams had left the city without granting an appointment to representatives of the Union, this letter was presented to Mr. Lasseter on Wednesday, October 9 by a delegation composed of Mr. Rhine, representing the National Office, and members of Local 10 from the NYA Branch and other branches. Mr. Lasseter assured the delegation that Mr. Williams would receive the letter immediately upon his return a few days later.

On October 14 the National Office was informed by Mr. Lasseter that he had presented the letter to Mr. Williams. However, no reply has been received by the National Office to date.

Executive Committee
NYA Branch, Local 10
U.F.W.A.

Reprint from
Handbuch der experimentellen Pharmakologie
Handbook of Experimental Pharmacology

New Series

Edited by: O. Eichler, A. Farah, H. Herken, A. D. Welch

Volume XXXVI

Editors: H. C. Hodge, J. N. Stannard, J. B. Hursh

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Chapter 13

Bioassay of Plutonium

ANNE DE G. LOW-BEER

With 2 Figures

I. Introduction

Guidelines have been promulgated by the *International Commission for Radiological Protection* and by national commissions in many countries, for the protection of workers in establishments where atomic energy is employed. These guidelines require personnel monitoring for each individual who has a reasonable possibility of acquiring a dose that exceeds a small fraction of the maximum permissible doses established by these regulatory bodies. Such monitoring includes the use of film badges, thermoluminescent dosimeters, monitoring of working areas, and radiochemical analysis of excreta and other biological materials together with *in vivo* counting. The two latter procedures constitute a bioassay program.

Permissible dose recommendations defined by NCRP (1971) are related to "(1) exposure at low dose rates or from sporadic small exposures which may occur in a random pattern with some semblance of daily, weekly, or monthly repetition; (2) accidental exposures which may result in high level acute exposure, and which may occur as rare exceptions in a general area of good control." It is the function of a bioassay program to evaluate the effect on personnel of both types of risk.

The foregoing principles apply to the hazard of internal contamination by any radionuclide, and therefore hold true for the transplutonium elements as well as for plutonium. The general considerations that underlie a bioassay program for any of the transuranium elements are set forth in this chapter and are not repeated in Chap. 20. These include protocols for routine monitoring and for accidental exposures, methods of preparation of samples for radiochemical analysis, and instrumentation for detection of alpha radioactivity and L X-rays. Interpretation of bioassay results relies on models that have been developed for evaluation of plutonium body burdens and is, therefore, included in this chapter. Finally, radiochemical procedures designed to isolate plutonium when it is the only nuclide of interest will be found in this chapter, while those in which plutonium is one of several actinide isotopes that may be present in a given sample, are included in Chap. 20. Methods of gamma spectrometry which are applicable to many of the transplutonium elements, but not to plutonium, are also discussed in Chap. 20. Thus, these two chapters should be regarded as complementary parts of a single subject. An arbitrary division of material has been adopted in the hope of avoiding redundancy. Nevertheless, some regrettable but inevitable overlapping and duplication will be noted.

II. Scope and Frequency of Sampling for Routine Monitoring

The vast majority of routine bioassay determinations are performed on urine. Reasons for the selection of urine rather than feces are discussed in the section on Interpretation of Bioassay Results. Fecal samples, nose swipes, and blood are frequently analyzed in cases of accidental acute exposure.

Persons included in a routine program should include those who work directly with radioactive materials, and those whose proximity to such work involves a possibility of exposure. Among the latter are monitors, maintenance personnel, custodians, and animal caretakers.

Frequency of routine sampling should depend on the degree of risk inherent in the occupation. The shortest interval reported by any laboratory is three months for persons at high risk, the longest is one or more years for those whose chance of exposure is minimal. HARLEY (1964) has suggested that experience should dictate the scope of a routine bioassay program. Where satisfactory environmental control has been demonstrated over a long period, and determinations are consistently negative, persons shown to be at very low risk may be dropped from the routine program.

III. Collection and Initial Handling of Samples

Comparability of results requires accurate knowledge of the time covered by the collection. For detection of very low levels of radioactivity, this should be 24 hours for a urine sample. Adequacy of the collection period may be determined by having the subject record the starting and ending times, by measuring the volume (assuming excretion of approximately 1.5 liters per 24 hours), or by performing creatinine determinations on all samples. Quality control is essential to insure consistently accurate results. This is accomplished by making reagent blanks for all determinations and by use of frequent spikes or tracers to check on chemical recovery.

Sample collections should be made away from the laboratory to avoid contamination of the sample or container by nonmetabolized radionuclides. Accordingly, many laboratories require two overnight collections, and subjects are requested to remove work clothing and to bathe before starting the collection.

Because of the phenomenon of surface adsorption at neutral or alkaline pH, collections should be made in plastic rather than glass containers. If use of glass cannot be avoided, urine should be acidified to approximately 0.1 N H^+ with either nitric or hydrochloric acid at the time of collection. Samples that are stored for any length of time should be acidified even when plastic containers are used.

Urine samples to be analyzed radiochemically are transferred to beakers of suitable size, and the urine volume is measured. The sample may be digested by one of two methods: (All operations must be carried out in hood).

Wet Ashing. Enough concentrated nitric acid is added to change the color of the sample to dark brown. One or two ml of octyl alcohol are added to prevent foaming. The beaker is covered with a speedy vap and set on a hot plate to evaporate. When the sample is dry, it should be reheated to dryness with 10 ml increments of concentrated nitric acid until a pure white ash remains. The residue is dissolved by addition of 10 ml concentrated nitric acid and 35 ml distilled water, heated gently on a hot plate. The contents of the beaker is transferred quantitatively with repeated small rinses of 2 N nitric acid to a 90 ml pyrex centrifuge tube. The sample is then ready for the bismuth phosphate, lanthanum fluoride precipitation procedure.

Alkaline Phosphate Precipitation (LASL, 1958). The sample is made 0.1 N in H^+ by addition of a suitable amount of concentrated hydrochloric acid. The beaker is set on a hot plate and equipped with a mechanical or magnetic stirrer. A thermometer is placed in the sample and the beaker is covered with a watch glass. The sample is heated gently with continuous stirring to 85° C. Six ml of 6 M phosphoric acid are added, and by dropwise addition of concentrated ammonium hydroxide, the pH is brought to 8 (determined by Universal Hydriion paper). The temperature should not be allowed to exceed 90° C. The heat is reduced to bring the temperature of the sample to approximately 65° C and stirring is continued for several hours. The stirrer and thermometer are removed and the covered beaker is placed overnight in an oven at 65° C. The following morning the supernatant is carefully aspirated taking care not to disturb the precipitate. The remaining suspension is transferred to one or two 90 ml pyrex centrifuge tubes and centrifuged for five minutes at 2000 rpm. The supernatant is discarded and the precipitate is washed with distilled water and centrifuged for five minutes at 2000 rpm. The supernatant is discarded and the precipitate is dissolved in a few ml of concentrated nitric acid and transferred quantitatively to the original beaker, using several small rinses of 2 N nitric acid. The beaker is set on the hot plate, covered with a speedy vap and evaporated to dryness. Evaporation with small increments of concentrated nitric acid is continued until a pure white ash is obtained. Two or three such evaporations usually suffice.

In this procedure, monovalent cations remain in solution and are eliminated when the supernatant is aspirated. All other cations are precipitated. The divalent cations that are normally present in urine serve as carriers. With very dilute urines, however, it may be necessary to add a small amount of calcium or magnesium chloride to bring about precipitation. Alkaline phosphate precipitation is a quicker method than wet ashing, and the elimination of monovalent cations is an advantage in some radiochemical procedures, such as ion exchange chromatography. LOW-BEER and PARKER (1964) have shown that recovery of actinide elements by this method is as good or better than by wet ashing, except in urines from subjects who have received DTPA (or other chelating agent). At pH 8, the metal chelate complex is tightly bound, so that 90% of the transuranium elements are lost in the supernatant. ILORM (1971) has shown that this caveat applies also to extraction from untreated urine. In the presence of DTPA, HDEHP extracts only free americium from raw urine. Only wet ashing destroys all organic material, and so destroys the complex and prevents its reformation if the pH is elevated.

Fecal samples, tissues, blood, and nose swipes are dried in an oven at approximately 70° C for 24 to 48 hours and are then heated in a muffle furnace at 500° C for 12 to 16 hours. The resulting ash is then digested with concentrated nitric acid, as in the wet ashing method for urine.

The presence of relatively large amounts of iron in such samples interferes significantly with recovery of actinides by established methods. GOLCHERT and SEDLET (1972) have developed a modification of the anion exchange method (Sec. V.B.1) for the analysis of environmental samples. The method has proved equally effective in removing iron from samples of feces, blood, and tissues. The essential features of the method will be found in Sec. V.B.2.

IV. Radiochemistry of Plutonium

The chemistry of plutonium and industrial methods for its separation, conversion and recovery have been discussed comprehensively by CLEVELAND (1970). A review of the chemical and physical properties of plutonium will be found in

Chap. 9 of this volume. Those aspects of plutonium chemistry that are of particular interest to the analytical radiochemist have been summarized by COLEMAN (1965) in a publication of the Committee on Nuclear Science of the National Academy of Sciences, National Research Council (1965). From the point of view of the bioassayist, the most important feature of plutonium chemistry is the fact that in aqueous solution ions may be maintained selectively in either the +III or +IV valence states. In the +III state, plutonium will undergo all the reactions common to the transplutonium elements, while in the naturally predominating +IV state, the greater stability of plutonium complexes can be exploited in ion exchange and solvent extraction procedures. The tendency of +IV ions to polymerize as a result of hydrolysis should be mentioned although it need not be a problem in bioassay, since polymerization is favored by high concentration of plutonium, by low acidity, and by increased temperature. The avoidance of polymerization in analytical work is important because the chemical properties of polymers are different from those of ions and would, therefore, give misleading results.

V. Procedures for Isolation of Plutonium

The literature is replete with methods for determination of plutonium in biological and environmental samples. Most of these methods are variations of basic procedures which utilize the precipitation, ion exchange, and complex forming properties of plutonium. In the following sections, detailed procedures are presented to illustrate the application of chemical principles to the bioassay of plutonium. All of these methods were designed originally for the isolation of plutonium only, although several of them are applicable to the transplutonium elements as well. Thus, no distinction is made between methods that employ the +III or +IV valence states of plutonium.

A. Precipitation Methods

1. Coprecipitation with BiPO_4 and LaF_3 (SCHUBERT et al., 1951). This was the earliest precipitation method for recovery of plutonium from biological material. It is now used widely for all the actinide elements except uranium and radium and is presented in Chap. 20.

2. Coprecipitation with Cupferride (BROOKS, R.O.R., 1965).

a) Dissolve the ashed residue of a 24 hour urine sample in ~ 30 ml of 4 N HCl and transfer to a 250 ml beaker. Use alternate washings of 4 N HCl and water to complete transfer to a final volume of 100 ml and acidity of about 2 N. Stir until solution is complete.

b) Add 5 ml of FeCl_3 solution (145 mg FeCl_3 /liter) and 10 ml of 5% hydroxylamine hydrochloride followed by a few drops of cresol-red indicator.

c) Adjust the pH to 1 with 2 N NH_4OH added dropwise with constant stirring. Avoid formation of phosphate precipitation as this would reduce recovery. Allow the titrated solution to stand for one hour to insure reduction of plutonium to III.

d) Transfer the solution to a 500 ml separatory funnel and add 2 ml of 5% cupferron solution (make fresh weekly). Shake vigorously and allow to stand for 45 minutes to allow complete formation of iron cupferride.

e) Add 30 ml chloroform and shake vigorously. When the chloroform layer has settled, drain it through a 7 cm Whatman 41 filter paper into a 100 ml separatory funnel. Wash the chloroform by shaking with 20 ml of distilled water and run the chloroform into a 250 ml round bottom flask through filter paper as

above. Return the water to the original aqueous solution and add 5 ml of FeCl_3 solution and 2 ml of 5% cupferron as a scavenger. Shake and let stand for 45 minutes.

f) Extract the cupferrides with three 15 ml increments of chloroform, or continue until the chloroform remains colorless. Filter each such chloroform fraction into the 100 ml separatory funnel. Wash the filter paper with chloroform using a pipette, to remove cupferrides adhering to the paper. Add washings to the separatory funnel.

g) Add 20 ml distilled water to the chloroform extracts. Shake and allow to settle. Filter the chloroform layer into the 250 ml round bottom flask and wash the filter paper with chloroform.

h) Evaporate the excess chloroform in a fume cupboard using a heat mantle. Remove the final drops by blowing in air.

i) Add 3 ml of concentrated H_2SO_4 and 1 ml of concentrated HNO_3 to the residue and heat. Evaporate final traces of H_2SO_4 with a stream of air. If the residue is not white, add increments of acid and take to dryness again.

j) Dissolve the residue in 3 ml of concentrated HCl and transfer by means of a pipette to a platinum planchet. Dry by infra-red lamp. Use two further aliquots of HCl to insure quantitative transfer.

k) Take up the dried residue in a few drops of distilled water and add enough 2 N NH_4OH to insure complete precipitation of ferric hydroxide. Spread the precipitate evenly over the planchet using a glass rod with a fine tip.

l) Dry the planchet and flame over a bunsen burner to form the red oxide Fe_2O_3 .

Note. This method which is one of the earliest procedures for the determination of plutonium (it was developed originally in 1956) was first used in large scale separations. It is still in use as an analytical procedure in some laboratories, but it is given here because of its historical interest. Many of the determinations made in older experiments employed this method—a fact that should be borne in mind when results of such early work are being considered.

B. Ion Exchange

The prototype method given here owes much of its development to the work of many earlier investigators. In its present form, the method is widely used as it has the advantages of a high degree of sensitivity (0.05 dpm per 24 hour urine sample), reproducibility, and simplicity. It is specific for plutonium as compared with transplutonium elements, as it depends on adsorption of the anionic plutonium nitrate complex. Such a complex is formed only by plutonium in oxidation states greater than III. Recovery is said to be $84 \pm 14\%$.

1. Anion Exchange (CAMPBELL and MOSS, 1965)

a) Prepare a chromatographic column of following dimensions: a tube 3 inches long by $\frac{5}{16}$ inch inner diameter, topped with a reservoir $2\frac{5}{8}$ inches long by $1\frac{3}{32}$ inches inner diameter. Pack the tube to a height of 2.5–3.0 inches with Dowex AG 1X-2, 50–80 mesh anion exchange resin. Introduce the resin in a slurry of distilled water. Convert the resin to the nitrate form with two 5 ml washes of 8 N HNO_3 .

b) Dissolve the ashed residue of the alkaline phosphate digestion procedure in 80 ml of 8 N HNO_3 . Add the solution to the column and allow it to drain completely. Wash the container with three 10 ml portions of 8 N HNO_3 , adding each one in turn to the column and allowing it to drain thoroughly before adding the next increment.

c) Wash the walls of the reservoir with 5 ml of 8 N HNO_3 and allow it to drain.
 d) Add 3 ml of concentrated HCl to the top of the column, taking care not to disturb the resin. Allow this to drain completely and discard effluent and all washings.

e) Add 2 ml of 0.5 N HCl to the top of the column and collect all but the first few drops in a 15 ml centrifuge tube.

f) Elute the column with two 5 ml portions of 0.5 N HCl and collect eluate in the centrifuge tube from step "e".

g) Add a few crystals of hydroxylamine hydrochloride¹ to the top of the column and follow with 2 ml of hydriodic hydrochloric acid solution (1 ml hydriodic acid to 9 ml concentrated HCl , prepared fresh daily). Allow the column to drain completely and collect the effluent in the centrifuge tube.

h) Evaporate the contents of the centrifuge tube after adding 1 ml of concentrated HNO_3 . This will oxidize and expel residual iodine.

i) The sample may then be slurried and plated for direct counting, or prepared for electrodeposition (vide infra).

2. Procedure for Removal of Iron (GOLCHERT and SEDIET, 1972)

a) The activity is coprecipitated on $\text{Ca}_3(\text{PO}_4)_2$ which carries iron as well.

b) The precipitate is dissolved in $\text{Al}(\text{NO}_3)_3 \cdot \text{HNO}_3$ (8 N).

c) The dissolved material is placed on the column described in procedure 1 of this section and the remaining steps of that procedure are carried out. Iron is removed in the effluent and washes.

C. Solvent Extraction

Some of the earliest separations of plutonium were performed by extraction into organic solvents containing suitable ligands. Tributyl phosphate was a commonly used complexing agent. In more recent times, thenoyl trifluoroacetone (TTA) has been more widely used because of the greater stability of the resulting complex. Solvent extraction has the advantages of speed and simplicity but its sensitivity is significantly less than that of ion exchange chromatography. The use of solvent extraction for isolation of plutonium from urine or other biological material usually requires an initial precipitation step. This may be the BiPO_4 , LaF_3 coprecipitations described in Chap. 20, or the fluoride precipitation may be done with suitable carrier directly from the ashed residue of the sample. The latter method is used in the procedure given below.

1. Isolation of Plutonium by TTA Extraction² (SCHWENDIMAN and HEALY, 1958).

a) Cerium fluoride precipitation—carried out with ashed residue of a 24 hour urine sample, dissolved in 65 ml 2 N HNO_3 and transferred to a 100 ml centrifuge tube.

1. Add 0.5 gram hydroxylamine hydrochloride to the solution. Stir until dissolved. Use *teflon* rods for all stirring operations.

2. Add 1 ml cerium nitrate carrier solution (approximately 20 mg Ce^{+3} per ml). Transfer the solution to a new 100 ml *lusteroid* centrifuge tube with a small amount of distilled water. (Use the pyrex tubes as holders for the *teflon* rods during the following centrifuging operations).

Note. Carry out the following fluoride precipitations in a hood.

¹ Added to prevent immediate oxidation of hydriodic acid.

² The method given here is a modification of the original procedure used at Argonne National Laboratory.

3. Add 10 ml 1:1 hydrofluoric acid. Use a transparent *bakelite* graduated cylinder for measuring the hydrofluoric acid. Stir the solution for 1 minute; rinse off the *teflon* rod into the tube with distilled water; and let the solution sit for 5 minutes.

4. Centrifuge for 5 minutes at approximately 2000 rpm. Discard the supernatant, being careful not to disturb the precipitate.

5. Slurry the precipitate in 1 to 2 ml concentrated nitric acid. Add 10 ml distilled water and stir vigorously.

6. Add 2 N nitric acid in 10 ml portions until there is approximately 65–70 ml total volume, stirring well after each addition.

7. Add 10 ml 1:1 hydrofluoric acid and repeat the above precipitation and centrifuging procedures.

b) Solvent Extraction.

1. After pouring off the supernatant from the second fluoride precipitation, slurry the precipitate with 1 to 2 ml aluminium nitrate solution (740 grams/liter solution, including 20 ml concentrated nitric acid). Then add aluminum nitrate solution in 10 ml portions to a total volume of approximately 40 ml, with vigorous stirring after each addition. Continue stirring until all of the precipitate is in solution.

Note. The solution may sit overnight at this point, if necessary.

2. Add 100 milligrams sodium nitrite. Stir until dissolved. Set timer for 15 minutes. Transfer the solution to a 125 ml Squibb separatory funnel with 10 ml distilled water. (The separatory funnel is mounted in the wrist-action shaker. Clamp the funnel in such a way that the stopcock of the funnel is immediately below the lower jaw of the clamp. If mounted in this way, the funnel will not become loose during the shaking operations). Save the *lusteroid* tube, temporarily, and use it as a waste receiver during the extraction steps.

3. Fifteen minutes after the addition of the sodium nitrite, add 10 ml of 0.25 M TTA-benzene solution. Insert the vented *teflon* stopper. Shake well for 30 minutes.

4. Let stand for 5 minutes. After separation of the layers, remove the lower (aqueous) layer, collecting it in the *lusteroid* tube. This layer may then be discarded.

5. Add 20 ml distilled water to the funnel and shake for 10 minutes. Let stand for 5 minutes. Remove and discard the lower (aqueous) layer.

6. Add 10 ml distilled water to the funnel and shake for 10 minutes. Let stand for 5 minutes. Remove and discard the lower (aqueous) layer. The *lusteroid* tube should now be discarded.

7. Add 10 ml 8 N hydrochloric acid to the funnel and shake for 20 minutes. Let stand for 5 minutes. Collect the lower (hydrochloric acid solution) layer in a 30 ml beaker.

8. Add 5 ml 8 N hydrochloric acid to the funnel and shake for 5 minutes. Let stand for 5 minutes. Collect the lower (hydrochloric acid solution) layer in the same 30 ml beaker.

Note. The solution may sit overnight at this point, if necessary.

9. Discard the benzene solution remaining in the funnel by pouring it into the *organic* liquid waste container.

10. Evaporate the total HCl strip to incipient dryness. The residue may then be slurried, plated on a planchet for direct counting, or prepared for electrodeposition.

D. Electrodeposition of Plutonium

The apparatus of SCHWENDIMAN and HEALY (1958) is used for electrodeposition of all actinide elements. It is described briefly in Chap. 20 together with methods of electrodeposition of trivalent cations including reduced plutonium. For plutonium in higher states of oxidation, typically +IV, the following procedure is necessary.

1. Evaporate the final product of any of the chemical procedures to incipient dryness.

2. Rinse down the sides of the beaker with a small amount of distilled water. Add 2-3 drops of phenolphthalein indicator solution. Neutralize the solution by addition of 12 *N* potassium hydroxide solution with a capillary-tipped medicine dropper. The neutralization is complete when the solution becomes slightly brown or *very faint pink*.

Note. Do not pass the end-point of this neutralization, as plutonium IV will precipitate from alkaline solution. If the end-point is inadvertently passed, as indicated by the deep pink color of the solution, quickly add 1:19 hydrochloric acid to the solution until the pink color just disappears.

3. Add 2 ml 5% sodium hypochlorite solution.

4. Add 5 ml 2 *N* potassium hydroxide solution.

Note. The sample may be left overnight at this point, if necessary. If this is to be the case, bring the solution to a boil, cover with a watch glass, and after cooling, cover with parafilm. Do not carry out the following evaporation until the next day, when the sample is to be left overnight.

5. Evaporate the solution to half volume, and then cool to room temperature.

6. After evaporation and cooling of the sample, transfer the solution to the electrodeposition cell with distilled water, to give a total volume of 10 ml (to the red line marked on the cell wall).

7. Electroplate under these conditions—12 volts and 300 milliamperes—for 5 hours.

8. Remove cell(s) from the apparatus without turning off the power supply. Immediately decant the solution and rinse the cell with several portions of distilled water.

9. Dismantle the cell, rinse the electroplated disc with distilled water and dry in air.

10. The sample may then be counted in a proportional counter, an alpha pulse height analyzer, or radioautographed for nuclear track counting.

E. Nuclear Track Counting

The technique of nuclear track counting offers an alternative to electronic detection of radioactivity. At a time when few other methods had attained detection limits lower than 0.2 dpm per 24 hour urine sample, nuclear track counting had a sensitivity of 0.05 dpm. The method and the instruments that support it were developed by SCHWENDIMAN and HEALY (1958). The principal features of the system are:

1. Thin layers of nuclear track emulsion (Kodak NTA) spread on 1 × 3 inch microslides.

2. Elimination of background counts in the emulsion by prior exposure to H₂O₂ vapor under dessication at room temperature.

3. A "camera" designed to maintain electroplated discs in contact with the emulsion during exposure.

4. Exposure of emulsion to samples for 168 hours at 5° C.

5. Developing, fixing, and washing of slides without exposure to light.

6. Storage of exposed slides at 5° C.

7. Microscopic counting by a scanning system so that tracks within a total area of 4 mm² are counted.

8. Conversion of the number of tracks per unit area to dpm using the factors of exposure time, film efficiency, and exposure area.

9. Routine checking of film efficiency with a standard source.

VI. Detection of Radioactivity

An exhaustive discussion of instruments used to evaluate internal contamination by actinide elements is beyond the scope of this article. References cited in following sections provide the means of pursuing this subject in greater depth.

A. Alpha Counting

The principles and methodology of alpha counting have been reviewed in a comprehensive article by JAFFEY (1954).

1. Total Alpha Counting

Instruments used for total alpha counting are predominantly either pulse counters—usually of the proportional gas flow type—or scintillation counters. The former operate by collecting secondary ionizations of a gas which is contained between two electrodes at high potential. The electric field sweeps apart secondary ions formed in the gas by alpha particles, and the resulting pulse is measured. The initial charge from an alpha particle can, in this way, be multiplied by factors from 10 to 10⁵. These counters are operated with methane or an argon methane mixture.

Scintillation counters depend on the conversion of secondary electron energy into light by means of a solid or liquid scintillator, and the conversion of light flashes into electrical pulses by a photo-multiplier tube. Because these conversions are proportional to energy, scintillation counters have spectrometric properties. They are useful, however, for total alpha counting, as they have the advantage of very low background. A method for routine alpha counting of bioassay samples using a zinc sulfide phosphor has been described by HALDEN and HARLEY (1960), and is used in many laboratories.

To insure low detection limits and reproducibility of alpha counting, the following requirements must be satisfied. Counting instruments should approach 50% efficiency (2 π geometry); background must be low and stable; planchets must be of platinum or stainless steel and must be thoroughly clean and free of scratches in which a pile-up of the sample can occur; the mass of the sample must be as small as possible, and it must be spread evenly over the surface of the planchet in order to minimize self-absorption; planchets are dried under an infrared lamp, and are flamed to cherry red; counts should be made for at least 120 minutes to insure a small standard deviation. Proportional gas flow counters require frequent checks of counting efficiency, and they should be calibrated at regular intervals to insure that voltage and gain settings are optimal.

Total alpha activity of a sample is calculated by:

$$\frac{(\text{net cpm of sample} \pm \sigma) \times 100}{\text{C.E.} \times \text{C.R.} \times \text{S.A.} \times \text{aliquot}} = (\text{dpm} \pm \sigma)/\text{whole sample}$$

C.E. = counting efficiency; C.R. = chemical recovery; S.A. = self absorption (determined by incorporating a spike in the slurry or residue of the final product of the chemical procedure carried out with only the reagents).

The count of the reagent blank constitutes the background.

2. Alpha Spectrometry

Isotopes of the actinide elements emit alpha particles with energies in the range of about 4–8 Mev. There are fifteen isotopes of plutonium with energies from 4.89 to 6.58 Mev. Of these, only ^{239}Pu and ^{240}Pu , with energies of 5.50 and 5.16 Mev, respectively, are ordinarily encountered in bioassay programs. The transplutonium isotopes of greatest significance in bioassay have energies from 5.4 Mev (^{240}Am) to 6.12 Mev (^{242}Cf). Instruments described by JAFFEY (1954) for the identification of these nuclides by alpha energy measurements have been largely superseded by the development in recent years of semiconductor detectors. The use of these instruments for alpha spectrometry has been discussed by HOPKINER et al. (1969). The essential features are a semiconductor silicon diode with a reverse bias across it, an amplifier, and a multichannel pulse-height analyzer. Ionization occurs when a nuclear particle penetrates the depletion layer of the detector, caused by the reverse bias. Pairs of charge carriers are freed and, under the influence of an electrical field, they travel towards two electrodes thereby producing a pulse. The number of charge carriers so freed is a function of the energy of the incident particle, and the pulse height is, therefore, proportional to this energy. Because of the very short range of alpha particles, surface barrier detectors give best results by causing the depletion layer to form at the surface of the detector. A surface barrier consists of a thin coating of gold which has been evaporated on the surface of the silicon diode. These counters must be operated under vacuum to avoid energy losses due to collision of alpha particles with gas molecules. The superiority of these detectors is due to their low background and their high resolution.

The preparation of samples for alpha spectrometry is as important as the counting instrument itself. To insure high resolution, samples must be virtually weightless, and must be free of all interfering material. They must also be as nearly point sources as possible. These objectives are attained by electrodeposition (see Sec. V).

B. Gamma Spectrometry

Because of the exceedingly short range of alpha particles (WALSH, 1970) *in vivo* evaluation of alpha contamination depends on detection of gamma energy. In the case of plutonium, this is not feasible by the traditional method of whole body counting which requires the presence of abundant gamma rays of energies above approximately 0.1 Mev (see Chap. 20). Until the development of instruments capable of detecting low energy photons (vide infra), the bioassayist was wholly dependent on radiochemical analysis of excreta followed by alpha counting, for evaluation of internal contamination by plutonium. An exception to this has been reported by HEID et al. (1971) who have utilized the 59.5 Kev gamma ray of ^{241}Am , the daughter product of ^{241}Pu , in whole body counting. Quantitation of internally deposited plutonium by this method requires know-

ledge of the Pu/Am ratio of the ingested material. It also assumes that the metabolic behavior of the two nuclides is identical. Since the validity of this assumption is questionable (Chap. 18), this method can only approximate the body burden of plutonium, and it may underestimate it significantly.

C. Low Energy Photon Spectrometry

Development of instruments capable of detecting the L X-rays that are characteristic of all heavy elements has, in the words of HOLLANDER and PERLMAN (1966), created a "revolution in nuclear radiation counting". L X-rays of plutonium and the transplutonium elements have energies in the range 14 to 26 kev. Their values have been tabulated by FINE and HENDEE (1970). It is obvious that instruments capable of detecting the L X-rays from internally deposited ^{239}Pu would circumvent the limitations of conventional whole body counting with respect to this nuclide. In practice attenuation of L X-ray counts due to absorption in bone and soft tissue poses serious problems. Plutonium deposited in bone is not detectable by this technique. Deposition in lungs or other soft tissues can be determined quantitatively, but only after correlation of attenuation with chest thickness and body size. This question has been discussed by NEWTON et al. (1972) and MOSEY et al. (1972). The first instruments developed for this purpose were proportional counters consisting of two or more large area detectors and employing a mixture of argon-methane gas. They have been described by FESSLER et al. (1961), LANISART and MORUCCI (1964), FURER et al. (1964) and TOMITANI and TANAKA (1970) and SHARMA et al. (1972). In order to eliminate background counts, these counters are operated in anti-coincidence mode, and may also be designed to eliminate all counts except those from the nuclide of interest. Their chief disadvantage is their rather low sensitivity. A detection limit of 12 nCi in 30 minutes counting time is given by FURER et al. (1964) and this value closely approaches the 16 nCi maximum permissible lung burden for ^{239}Pu given by HEID et al. (1971).

L X-rays can be measured also by scintillation counters consisting of NaI crystals of thicknesses of a few millimeters. Absorption of low energy photons is almost complete within 0.25 mm of the surface of the crystal, and background is significantly reduced due to the thinness of the crystal. Such counters are being used increasingly for the measurement of lung burdens of ^{239}Pu . Typically the counter consists of two or more detectors operated in anti-coincidence mode. SWINTN and GRIFFIN (1970) have described an array of 52 one millimeter thick NaI crystals coupled to low-noise phototubes. While this system is promising, the authors have noted the need for further improvement to attain greater sensitivity. The recent development of Phoswich detectors appears to offer greater potential for *in vivo* counting of low energy photons. These detectors consist of two different scintillators, typically a thin NaI crystal mounted on a thicker crystal of CsI. Because of the difference in scintillation decay time of the two crystals, the detectors discriminate between X-ray/gamma, beta/gamma and neutron/gamma signals. Evaluations of their clinical performance have not yet appeared in the literature.

While thin NaI crystals provide a fairly sensitive means of counting L X-rays, their resolving power leaves much to be desired. The most spectacular advances in low energy photon spectrometry have come about through the development of semiconductor detectors. These are solid-state devices which employ semiconductor diodes of silicon or germanium drifted with lithium. They have been described by BOWMAN et al. (1966) who report counting efficiencies of 100%, and resolution

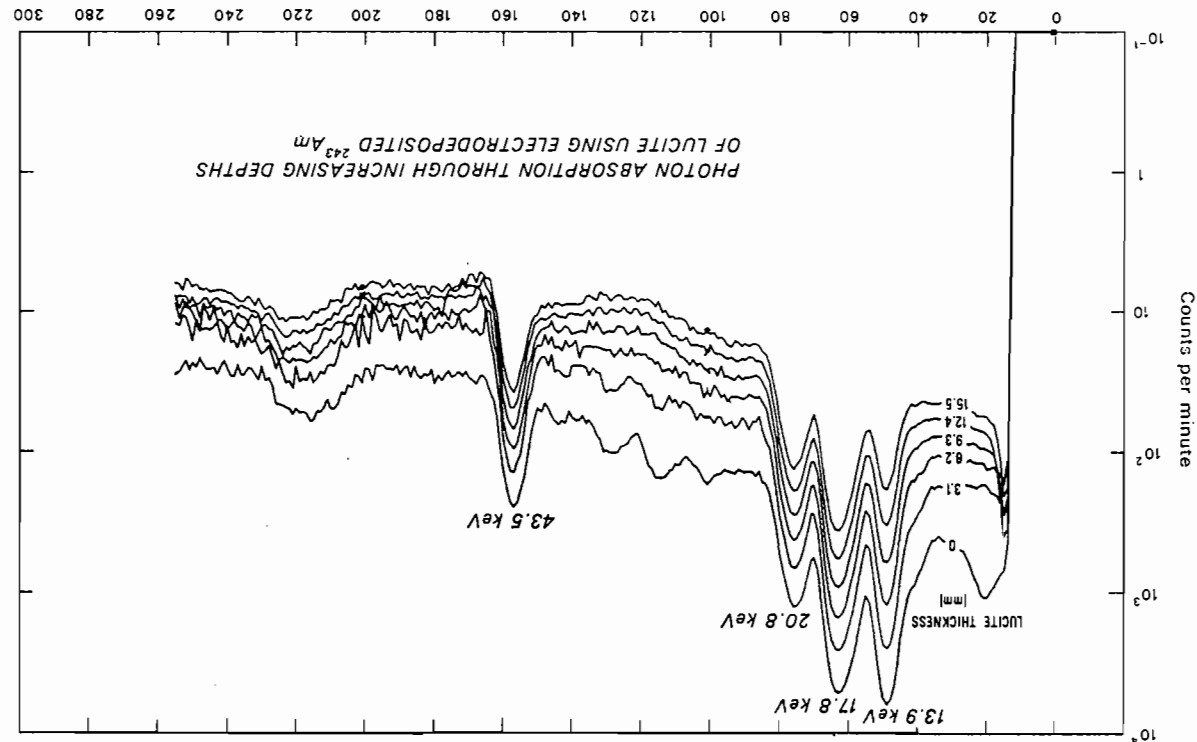
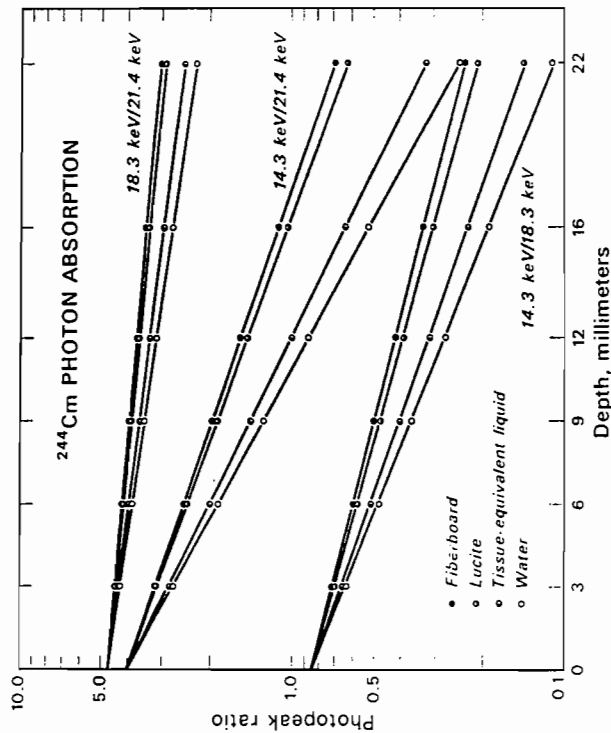


Fig. 13.1. Computer-drawn plots of spectra from a ^{243}Am source counted on a $\text{Si}(\text{Li})$ semiconductor with various depths of tissue-equivalent liquid between the source and the detector. Counts per minute are plotted semi-logarithmically against channel number covering an energy range from 1 to 120 keV. The difference in absorption for the different X-ray peaks is clearly illustrated. (PARKER et al., 1968)

DBL 680-5500



DBL 699-5080

Fig. 13.2. Curves of X- and gamma-ray peak ratios of ^{240}Pu plotted semi-logarithmically against depth of absorber for fibre-board, Lucite, water, and tissue equivalent liquid. Ratios between various peak regions were taken from data like those shown in Fig. 13.1. (PARKER et al., 1968)

of such a high order that photons which differ in energy by as little as 1.1 keV can be distinguished with germanium detectors. The spectrometry attainable with germanium detectors has also been reported by DREXLER and PERZI (1967). Silicon detectors have best resolution for the low energies of the L X-rays region, while germanium has equally good resolution over the entire range of gamma energies. Both detectors must be maintained at cryogenic temperature to insure stability and resolution. Fig. 13.1 illustrates the resolution of a point source of ^{243}Am by a $\text{Si}(\text{Li})$ detector, and also shows the attenuating effect on peak height of various thicknesses of an absorbing material. Fig. 13.2 demonstrates the effect on peak ratios of ^{240}Pu of several different absorbing materials of the same thickness. PARKER et al. (1968) have shown that by using such calibration methods an unknown point source can be quantitated, and localized with respect to depth in an absorbing material. The implications of this capability for wound counting in cases of human exposure are obvious.

ANDERSON et al. (1970a, b) have described the design of germanium systems for wound counting, lung counting, and whole body counting and have compared their performance to that of the sodium iodide crystals of conventional scintillation counters. The authors report a detection limit of 0.73 nCi for plutonium deposited in a wound at a depth no greater than 6 mm in a 10 minute period of counting for the germanium detector. Although the detection limit is higher by a factor of 7 than that attained with a thin NaI crystal, it is considered adequate for routine wound monitoring. The lower sensitivity of semiconductors, as com-

pared with NaI crystals of appropriate thickness, may be partially offset by using an array of several germanium detectors. Nevertheless, high detection limits and long periods of counting limit the usefulness of semiconductor detectors in lung or whole body counting. Their greatest value in such applications is due to their high resolution. Activity detected by a NaI scintillator appears spectrometrically as a broad peak, the components of which are indistinguishable. The semiconductor, on the other hand, is capable of resolving broad energy bands into discrete peaks separated by very small differences in energy, and thus affords a means of identifying the radioisotopes that are present. Semiconductor detectors are, therefore, instruments of great potential for the comprehensive investigation of internally deposited radionuclides.

Developing methods of direct measurement and identification of radionuclides in biological materials and in the living organism hold great promise for the future of bioassay programs. It seems probable that much of the time consuming and laborious effort now expended on the preparation of samples for alpha counting may be eliminated as modern and sophisticated counting instruments become generally available. When *in vivo* counting is feasible, the difficult problem of estimating the body burden from the observed excretion rate is also eliminated.

VII. Interpretation of Bioassay Data

Quantitation of human internal contamination by plutonium and other actinide elements is a complex problem when evaluation depends on alpha determinations of excreta and other biological materials. Many investigations have elucidated patterns of excretion and retention in a number of animal species. Extrapolation of animal data to man is, however, fraught with uncertainties. Moreover, in the uncontrolled circumstances of human exposure, many variables must be taken into account.

These have been discussed by POCHIN (1964), BEACH and DOLPHIN (1964), and by many others. They include the nature of the actinide-containing compound, the route of intake, the metabolic fate of the material, and the variability of excretion rates among individuals and in the same individual during different time periods. LANGHAM *et al.* (1956) were able to study the excretion of a group of human subjects who had received doses of citrated plutonium by intravenous injection. They proposed a power function of the form

$$Y = at^c$$

to describe long-term excretion of plutonium, and to account for differences in rate of excretion as plutonium is distributed to various body compartments. In this equation, Y is the excretion rate in fraction of injected dose excreted per day, t is the time after exposure in days, and a and c are constants. When the equation was fitted to the excretion curves of the human subjects, a and c were found to have the following values for excretion rates over a period of five years:

$$Y = 0.002 t^{-0.74}$$

$$Y + f = 0.0079 t^{-0.94},$$

where $Y + f$ are the fractions of injected doses of plutonium excreted per day in the urine and urine plus feces, respectively, and t is the time in days after injection. Using these values, LANGHAM (1957, 1964) developed a series of equations from which he was able to determine the original body burden, fractional

retention at any given time, coefficients of elimination in urine and feces, and the ratio of urinary to fecal excretion at any given time. BEACH and DOLPHIN (1964) have suggested the inclusion of an exponential term in LANGHAM's basic equation to express the early and rapid urinary excretion of presumably unmetabolized plutonium that occurs when citrated plutonium is administered intravenously. The equation proposed by BEACH and DOLPHIN is:

$$Y u(t) = 0.410 \exp(-0.67t) + 0.16 t^{-0.68}$$

The second component of the equation is a power function, and represents the excretion of metabolized plutonium. DURBIN (1971) has reexamined the Langham equations and has concluded that involvement of plutonium with the iron transport system modifies the intermediate steps in deposition, turnover, and excretion, without impairing the validity of the major aspects of Langham's original analysis.

BEACH and DOLPHIN (*op. cit.*) have pointed out that intravenous injection of citrated plutonium is not representative of the typical industrial exposure where internal contamination occurs most frequently by inhalation or by puncture wound. In either case, the rate of movement of plutonium from the site of initial deposition governs the rate at which systemic contamination will occur. BEACH and DOLPHIN have suggested the following equation to account for this process:

$$E u(t) = \int_0^t q(1 - \tau) Y u(t - \tau) d\tau,$$

where $E u(t)$ is the daily urinary excretion of plutonium, q is the amount initially retained at the site of entry, and the amount released to the blood at any time is $q(t)$. $Y u(t)$ is the power function component of the basic equation. It is obvious that urinary excretion before equilibrium is established will underestimate the body burden. Accordingly, evaluation based on urinary excretion is unreliable earlier than about 100 days after exposure.

In the typical puncture wound, plutonium is in colloidal form due to complexing with the anions of strong acids. Its rate of diffusion from the wound is, therefore, markedly slower than that of plutonium in ionic form, as in the citrate complex.

LAPUMA *et al.* (1972) have proposed a model which postulates that plutonium in colloidal form diffuses slowly from the site of entry and that a fraction of the diffused activity is excreted in the urine without prior deposition in bone or soft tissue—a probability which significantly alters the interpretation of early bioassay results.

DOLPHIN (1972) has called attention to the relatively new technique of analysis of chromosome aberrations as an additional tool for evaluation of internal contamination.

The distribution of inhaled plutonium in the compartments of the respiratory tract and its release from the pulmonary region of the lungs are determined by particle size and solubility of the compound. The *Task Group on Lung Dynamics* (1966) has developed a model to describe the kinetics of inhalation exposures. According to this model, about 75% of the inhaled plutonium is rapidly expelled from the nasopharyngeal and tracheobronchial regions by ciliary action, and is excreted in the feces during the first four to seven days after exposure. The 25% of the inhaled material that reaches the pulmonary region diffuses into the adjacent lymph nodes at a rate that is proportional to the solubility of the par-

ticles. Typically, these are oxides of plutonium, and their extreme insolubility accounts for the half-life of plutonium in the lung.

The importance of determining fecal excretion immediately following an inhalation exposure has been emphasized by DOLEMAN and JACKSON (1964) and by EAKINS and MORGAN (1964). A high fecal to urinary ratio at this time establishes the existence of a lung burden, and provided that all fecal specimens for the first few days are analyzed, the total burden can be approximated by use of the model. It is evident, however, that systemic contamination is more reliably estimated from urinary excretion rates, due in part to the relation of urine collections to definite time periods.

It will be seen from the foregoing that internal contamination by plutonium can be estimated with reasonable accuracy when the time of exposure is known. In the case of chronic or sporadic exposure at unknown times, the problem is more difficult. This is the kind of exposure encountered in routine programs of surveillance. A number of investigators have developed codes based on the LANGHAM equations that are designed to apprehend any increase in activity found in routine monitoring of urine samples. The codes depend on computerization of analytical data, and each analytical result represents an interval defined by the last previous sampling. A significant increase in activity is presumed to indicate an additional intake during the interval. Such codes have been reported by LAWRENCE (1962), SNYDER (1962, 1964), BEACH et al. (1966) and by BEACH (1973). BEACH et al. (1966) have suggested establishment of reference and investigation levels for routine monitoring. Excretion values at or below the reference level may be regarded as insignificant, while those approaching or exceeding the investigation level require medical judgment regarding treatment or possible change in work assignment. They point out that frequent monitoring is advisable in situations that have a high potential for exposure, since a number of small exposures may produce a cumulative excretion rate that exceeds the investigation level. In order to overcome the problem of daily fluctuation of excretion rate, these authors advocate collection of several samples on successive days rather than a single 24 hour sample, and analysis of an aliquot of the pooled samples.

SNYDER (1972) has developed a computer code which adjusts the parameters a and c of the Langham equation to fit the observed excretion curve of an exposed individual. By this means misinterpretation due to fluctuations within an overall trend are minimized. The author points out that the method is most useful when a large number of samples are analyzed.

In view of the many uncertainties that beset the determination of the relation of excretion to body burden, the thoroughness and accuracy of bioassay procedures assume great importance. The necessity for frequent monitoring of individuals at high risk has been mentioned, and has been discussed by HOLLADAY et al. (1970). In all monitoring, whether routine or in cases of accidental acute exposure, it is advisable to follow an established protocol. Only in this way can the physician be assured of receiving comparable and consistent information on which to base his decisions. In accidental exposure cases, investigation should include whole body, wound, and/or lung counting, determination of all urinary and fecal excretion for several days following the accident, analysis of nose swipes and blood samples taken immediately after exposure. A prototype procedure encompassing all of these measures is practiced at the Battelle Northwest Laboratory, and has been reported by HEND et al. (1971). The methods and procedures followed at HARWELL have been reviewed by JACKSON and TAYLOR (1964).

Summary

The principles on which bioassay programs are based have been reviewed and related to recommendations of the International Commission for Radiological Protection.

Methods of collection and preparation of biological samples for radiochemical analysis have been presented.

Methods for the isolation and identification of plutonium in biological materials are given in detail.

Detection of radioactivity is discussed in terms of alpha counting and low-energy photon spectrometry. The limitations of conventional whole-body counting for detection of plutonium are elucidated. Interpretation of bioassay results is discussed, and equations relating excretion rates to body burden are presented.

References

- ANDERSON, R. V., BEACH, P. E., USTUN, C. M.: Comparison of germanium and sodium iodide *in vivo* measurement systems. IAEA-SM 143 35 (1970).
 Assessment of radioactive contamination in man. Vienna: IAEA 1972.
 BEACH, S. A.: Search, a digital computer program for the estimation of body content of plutonium from urine data. *Health Phys.* 24, 9 16 (1973).
 BEACH, S. A., DOLEMAN, G. W.: Plutonium body burdens. In: Assessment of radioactivity in man, vol. 1, p. 603 613. Vienna: IAEA 1964.
 BEACH, S. A., DOLEMAN, G. W., DOUGLAS, K. P., DYSTER, H. J.: A basis for routine urine sampling of workers exposed to plutonium-239. *Health Phys.* 12, 1671 1682 (1966).
 BOWMAN, R. R., DYER, E. K., THOMPSON, S. G., JARED, R. C.: Application of high resolution semiconductor detectors in X-ray emission spectroscopy. *Science* 141, 362 368 (1966).
 BUCKER, R. O. R.: Determination of plutonium in urine. In: The radiochemistry of plutonium. National Academy of Sciences, National Research Council, NAS-NSR858, p. 150 151 (1965).
 CAMPBELL, E. F., MOSS, W. D.: Determination of plutonium in urine by anion exchange. *Health Phys.* 11, 737 742 (1965).
 CHANDLER, J. M.: The chemistry of plutonium. New York: Gordon & Breach, Science Publishers 1970.
 COLEMAN, G. H.: The radiochemistry of plutonium. National Academy of Sciences, National Research Council, NAS-NSR858, p. 4 103 (1965).
 DOLEMAN, G. W.: Some problems in interpretation of bioassay data. In: Assessment of radioactive contamination in man, p. 425 435. Vienna: IAEA 1972.
 DOUGLAS, G. W., JACKSON, S.: Interpretation of bioassay data. In: Assessment of radioactivity in man, vol. 1, p. 329 334. Vienna: IAEA 1964.
 DREMLER, G., PEZLA, F.: Spectrometry of low-energy γ and x-rays with Ge (Li) detectors. *Med. Instr. and Meth.* 48, 332 334 (1967).
 DRYDEN, P. W.: Plutonium in man: a twenty-five year review. University of California Lawrence Berkeley Laboratory Report No. UCRL-20830, 1971, 141 p.
 EAKINS, J. D., MORGAN, A.: Fecal analysis in bioassay. In: Assessment of radioactivity in man, vol. 1, p. 231 244. Vienna: IAEA 1964.
 EMMER, R., KRIEGER, R., MÜLLER, G.: Performance of an arrangement of several large-area proportional counters for the assessment of ^{239}Pu lung burdens. In: Assessment of radioactivity in man, vol. 1, p. 141 149. Vienna: IAEA 1964.
 FESSLER, H., KRIEGER, H., MACHART, H.: Zur Messung von Quantenstrahlung in Energiebereich von 3 30 Kev mit großflächigen Proportionalzählrohren. *Atompraxis* 7, 401 (1961).
 GOLDBERT, N., SCHLIER, J.: Detection of plutonium in environmental samples. To be published (1972).
 HALDEFER, N., HARTLEY, J. R.: An improved alpha-counting technique. *Analyt. Chem.* 42, 1861 1863 (1960).

- BARLEY, J. H.: Sampling and analysis for assessment of body burdens. In: Assessment of radioactivity in man, vol. 1, p. 155-167. Vienna: IAEA 1964.
- FIELD, K. R., JECH, J. J., BRAMSON, P. E.: Routine and emergency evaluations of internal exposure at Hanford. BNWL-SA-3840 (1971).
- HOFFER, W. K., NIEHUIS, K., POST, J. C.: α -particle spectrometry with semi-conductor detectors. Philips Tech. Rev. 30, 13-22 (1969).
- HOLLANDER, J. M., PERLMAN, I.: The semiconductor revolution in nuclear radiation counting. Science 154, 84-93 (1966).
- HOLLIDAY, B., DOLPHIN, G. W., DUNSTER, H. J.: Radiological protection of workers exposed to airborne plutonium particulate. Hlth Phys. 18, 529-540 (1970).
- FORM, I.: Techniques for separating americium from urine after DTPA therapy. Hlth Phys. 21, 41-46 (1971).
- International Commission for Radiological Protection. Reports Nos. 6, 7, 8, 9, 10, 12.
- JACKSON, S., TAYLOR, N. A.: A survey of the methods used in the United Kingdom Atomic Energy Authority for the determination of radionuclides in urine. In: Assessment of radioactivity in man, vol. I, p. 169-194. Vienna: IAEA 1964.
- JAFFEY, A. H.: Radiochemical assay by alpha and fission measurements. The Actinide Elements, National Nuclear Energy Series, Div. IV, Vol. 14A, SEABORG and KATZ, eds., p. 596-732. New York: McGraw Hill 1954.
- LAFFUMA, J., NENOT, J. C., MARIN, M.: Problemes poses par l'utilisation des donnees d'excretion urinaire pour l'evaluation de la charge corporelle. In: Assessment of radioactive contamination in man, p. 235-245. Vienna: IAEA 1972.
- LANGHAM, W. H.: The application of excretion analysis to the determination of body burden of radioisotopes. Brit. J. Radiol. Suppl. 7, 95-113 (1957).
- LANGHAM, W. H.: Physiological properties of plutonium and assessment of body burden in man. In: Assessment of radioactivity in man, vol. II, p. 565-581. Vienna: IAEA 1964.
- LANGHAM, W. H., BASSETT, S. H., HARRIS, P. S., CARTER, R. E.: Distribution and excretion of Pu administered intravenously to man. LA1151 (1950).
- LANTISART, A., MORUCCI, J. P.: Nouveau compteur proportionnel destine a la detection *in vivo* de traces de plutonium dans les poudrons. In: Assessment of radioactivity in man, vol. I, p. 131-140. Vienna: IAEA 1964.
- LAWRENCE, J. N. P.: PUQFUA, An IBM 704 code for computing plutonium body burdens. Hlth Phys. 8, 61-66 (1962).
- Los Alamos Scientific Laboratory. Analytical Procedures of the Industrial Hygiene Group. LA 1858, 2nd Ed. (1958).
- LOW-BEER, A. DE G., PARKER, H. G.: Decreased recovery of gross alpha determinations by alkaline phosphate precipitation in the presence of DTPA. Hlth Phys. 11, 61-62 (1965).
- MORSY, S. M., EL-ASSOLY, F. M., ALOUSH, A. A.: Direct methods for the assessment of plutonium-239 and uranium-235 body burdens. In: Assessment of radioactive contamination in man, p. 115-127. Vienna: IAEA 1972.
- National Council on Radiation Protection and Measurements Reports Nos. 33 (1968) and 39 (1971), Washington, D.C.
- National Research Council, National Academy of Sciences. The Radiochemistry of Plutonium. NAS-NR 3058 (1965).
- NEWTON, D., FRX, F. A., TAYLOR, B. T., EAGLE, M. C.: Factors affecting the assessment of plutonium-239 in vivo by external counting methods. In: Assessment of radioactive contamination in man, p. 83-96. Vienna: IAEA 1972.
- PARKER, H. G., WRIGHT, S. R., LOW-BEER, A. DE G.: Actinide Element Studies with a Si(Li) "wound counter". Semiannual Report Biology and Medicine, Donner Laboratory, Lawrence Berkeley Laboratory, UCRL-18793, 128-134 (1968).
- POCHIN, E. E.: Formulation of relationships between the radiation exposure of tissues and the excretion rate of nuclides. In: Assessment of radioactivity in man, vol. I, p. 3-14. Vienna: IAEA 1964.
- SCHWENDIMAN, L. C., HEALY, J. W.: Nuclear track technique for low level Pu in urine. Nucleonics 16, 78-82 (1958).
- SHARMA, R. C., NILSSON, I., LINDGREN, L.: A twin large-area proportional flow counter for the assay of plutonium in human lungs. Aktiebolaget Atomenergi Studsvik. Nyköping, Sweden (1972) AE-463, 35 p.
- SNYDER, W. S.: A method of interpreting excretion data which allows for statistical fluctuation of the data. In: Assessment of radioactive contamination in man, p. 485-494. Vienna: IAEA 1972.
- SNYDER, W. S.: Major sources of error in interpreting urinalysis data to estimate the body burden of ^{239}Pu : a preliminary study. Hlth Phys. 8, 767-772 (1962).
- SNYDER, W. S.: On the estimation of a systemic body burden of plutonium. In: Assessment of radioactivity in man, vol. II, p. 583-588. Vienna: IAEA 1964.
- SWINTU, K. L., GRIFFIN, B. I.: A developmental scintillation counter for detection of plutonium *in vivo*. Hlth Phys. 19, 543-550 (1970).
- Task Group on Lung Dynamics. Deposition and retention models for internal dosimetry of the human respiratory tract. Hlth Phys. 12, 173-207 (1966).
- TONITANI, T., TANAKA, E.: Large area proportional counter for assessment of plutonium lung burden. Hlth Phys. 18, 195-206 (1970).
- WALSCH, P. J.: Stopping power and range of alpha particles. Hlth Phys. 19, 312-316 (1970).

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Bioassay of Transplutonium Elements

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Chapter 20

Bioassay of Transplutonium Elements

ANNE DE G. LOW-BEER

I. Introduction

Since the beginning of the atomic age the overriding concern in bioassay programs has been the detection of uranium and plutonium. These nuclides have presented the chief danger of internal contamination of workers in the atomic energy industry. The irradiation of uranium and plutonium produces transplutonium elements amounting to only a few percent of the target material. These elements have, therefore, constituted a relatively small hazard incidental to the far greater danger of contamination from uranium and plutonium. Indeed, concern for the transplutonium elements as potential hazards to workers was first engendered by reports of accidental contamination with americium by FOREMAN et al. (1958), and by DOBSON (1955), and ROWLAND et al. (1955). The case reported by FOREMAN received his exposure by inhalation. He was treated with a chelating agent (EDTA) and retention of americium was evaluated by radiochemical analysis of excreta, which was carried on for several years. The case reported by DOBSON and the ROWLAND group received his exposure by puncture wound, and is believed to be the first instance in which both radiochemical analysis of excreta and whole body counting were used to measure retention of the isotope.

Today the transplutonium elements are being produced in vastly increased amounts due to their potential usefulness (chiefly americium and californium) in research and medicine (see Chap. 21). Their prominence in bioassay programs of the future is therefore assured. The methodology of bioassay was developed as a means of evaluating human exposure to plutonium and uranium. The general considerations that govern methodology have been described in Chap. 13, and are applicable to the transplutonium elements. However, many of the isotopes of these elements have properties that impose a need for special precautions in monitoring, and in handling samples. Spontaneous fission gives rise to large amounts of high energy gamma radiation and occurs in many isotopes of the transplutonium series (LEDERER et al., 1967). Californium-252 produces neutrons amounting to approximately 3.6 per fission (U.S. Atomic Energy Commission, 1968). This property, which makes ^{252}Cf useful as a therapeutic agent, constitutes an additional hazard to involved personnel. Adequate shielding is therefore necessary for safe handling of any material that contains any of these radionuclides. Furthermore, increasing specific activity of the transplutonium isotopes with increasing atomic number, adds to their toxicity as sources of internal contamination. This consideration should have bearing on frequency of sampling for potentially exposed personnel.

Chap. 13 includes a fairly detailed description of instruments used for the detection of radioactivity *in vivo* and *in vitro*. None of this material is repeated

here. The present chapter is concerned with radiochemical and detection methods that have been designed to take advantage of the chemical and physical properties of the transplutonium elements that differ from those of plutonium. These relate to the predominantly trivalent state of the transplutonium elements and to the emission of abundant high energy gamma rays by many of them.

II. Chemical Bases for Separation of the Transplutonium Elements

The transplutonium elements were identified by PERLMAN and STREETER (1954) as americium, atomic number 95; curium, 96; berkelium, 97; and californium, 98. The chemistry of these elements was elucidated in classical articles by these authors and by SEABORG (1954). Brief reviews of the radiochemistry of these elements are contained in two publications of the Nuclear Science Series of the National Academy of Sciences (U.S.A.E.C.) (1960). Discovery of additional elements in the actinide series has extended the designation of transplutonium elements to all the predominantly trivalent members of the series.

SEABORG et al. (1949) observed that the 5f electron shell of the actinide series was in the process of being filled, and correctly predicted increasing stability of the III state in the actinides which would culminate in a very stable state in elements 95 and 96. The analogy is at once apparent between the trivalent actinide and the lanthanide elements in which the 4f electron shell is being filled. The transplutonium elements in fact must be regarded as homologues of the lanthanides, with chemical properties more similar to each other and to the lanthanides than to the preceding members of the actinide series. For this reason the transplutonium elements are readily separated from more highly oxidized uranium, plutonium, and neptunium; oxidation-reduction reactions are not applicable in the separation of the transplutonium elements from each other¹; separation of transplutonium elements from lanthanides is difficult.

Early work on separation of the transplutonium elements has been reviewed by THOMPSON et al. (1949), WERNER and PERLMAN (1949), and by HYDE (1954). A review by STARY (1966) summarizes more recent progress in this area. The chemical properties that have governed the development of radiochemical procedures for bioassay are reviewed briefly in the following sections. A more comprehensive treatment of this subject will be found in chap. 17 of this volume.

A. Precipitation

The transplutonium elements and plutonium in the reduced state (but not radium or uranium), undergo precipitation in the presence of suitable carriers, with phosphate, oxalate, and fluoride ions. LAWROSKI (1955) and HULL and COOPER (1958) used coprecipitation with bismuth phosphate in early separations of plutonium from uranium. The solubility of TP-phosphate is very low at molar H^+ concentration and is comparable to the solubility of rare earth phosphates. Coprecipitation with oxalate or fluoride ions must also be carried out at low pH to avoid precipitation of divalent ions, and requires a rare earth element, usually cerium or lanthanum, as carrier. In any precipitation method, therefore, complete

¹ Americium, although predominantly trivalent in aqueous conditions, can be oxidized by very strong reagents. MOORE (1963) has shown that peroxodisulfate catalyzed by silver oxidizes americium to VI. In this state americium is not precipitated by fluoride, and this affords a means of separating it from other transplutonium elements, since later members of the series are not oxidizable by any means.

purification of the actinides requires separation from rare earth elements. THOMPSON et al. (1949) showed that in the presence of fluosilic acid precipitation of transplutonium elements with fluoride ion is inhibited, while precipitation of rare earth elements is nearly complete. By this means 90% group separation of transplutonium and lanthanide elements has been accomplished. SILL (1969) found that all of the actinide elements can be precipitated on barium sulfate, and that under suitable conditions sequential separation of individual members of the entire actinide series can be accomplished.

Precipitation methods, even when the carrier cation remains, result in preparations from which fission products and other interfering ions have been removed. They may be regarded as a first step in the purification of the transplutonium elements.

B. Ion Exchange Chromatography

Ion exchange is generally regarded as the most efficient means of separating transplutonium elements from lanthanides. Group and intragroup separations can be carried out on cation and anion exchange resins.

1. Cation Exchangers

Recovery of transplutonium elements from cation exchange resins involves first their adsorption by resin through exchange with a replaceable ion or group such as H^+ , NH_4^+ ; and second, their selective desorption through complexation with an appropriate eluant. STREETER et al. (1950) showed that transplutonium elements can be eluted as a group by 20% ethanol in 13.3 M hydrochloric acid. Since the transplutonium ions form more stable complexes with Cl^- than the lanthanides, they are eluted first, but differences in stability constants of the chloride complexes of transplutonium elements are not sufficient to effect separation of individual elements. DRAMOND et al. (1954) and SUNDL and CHORPIN (1957) have made group separations by using 1.8 M ammonium thiocyanate as eluant, though less efficiently than with alcoholic 13.3 M hydrochloric acid. Individual separation of transplutonium elements can be accomplished with organic eluting agents because of the marked differences in stability constants of their complexes. HARRIS and TOMKINS (1947), THOMPSON et al. (1949, 1954), and WERNER and PERLMAN (1949) successfully separated americium and curium by elution with 0.25 M citrate at pH 3.05. The slowness of elution by this method has led to its replacement by a number of other organic acids of which alpha-hydroxybutyric acid has been shown by CHORPIN et al. (1962, 1963), GARTI et al. (1959), BRANDSTERN et al. (1964) to be most effective in separating transplutonium elements from americium and curium from cation exchange columns with alpha-hydroxybutyric acid. The disadvantage of the method is the fact that stability constants of the transplutonium complexes, while differing from one another, are too similar to the stability constants of some of the lanthanide complexes to afford a means of complete separation of transplutonium and lanthanide elements. VOJTEK and SPRIN (1961) have shown that this difficulty can be partly overcome by use of organic aqueous solutions (e.g., dioxan-water, acetone-water), which alter the ratio of stability constants for lanthanide complexes, and thereby increase their separability. Inspection of stability constants of transplutonium elements with a number of complexing agents suggests that aminopolycarboxylic acids should afford good separation. FUGER (1958) has reported good separation of americium, curium,

berkelium, and californium with dilute ethylene-diaminetetraacetic acid (EDTA) at low pH, and diethylenetriaminepentaacetic acid (DTPA) has been used at the Oak Ridge National Laboratory (1961) in the separation of americium from promethium.

2. Anion Exchangers

In the use of anion exchange resins the transplutonium elements are introduced to the column in the form of anionic complexes which are adsorbed on the resin by replacement, and are then eluted selectively by suitable complexing agents. Elements which form the weakest complexes are eluted first, and are followed in order of increasing stability. Since stability of chloride complexes increases with atomic number, elution with 13 M hydrochloric acid elutes americium and curium before berkelium and californium. THOMPSON et al. (1949), WERNER and PERLMAN (1949), HULER et al. (1961) have shown that this effect is increased if 10 M lithium chloride acidified to 0.1 M in hydrochloric acid is substituted for concentrated hydrochloric acid.

MAHUS and GIVAN (1962) have investigated lithium nitrate as an elutant and have obtained a high degree of separation of a mixture of light lanthanides and of the americium-curium pair, but no separation of transplutonium elements from lanthanides was possible. In this system elements are eluted in order of decreasing atomic number—the reverse of the order obtained with lithium chloride, but identical with the elution pattern produced by organic complexing agents in cation exchange resins.

SUNDS and CUORIN (1957) have found that thiocyanate in anion exchange systems forms less stable complexes with lanthanides than with transplutonium elements. COLEMAN et al. (1956) have used this method to separate group quantities of americium from large amounts of rare earth elements. The use of organic complexing agents in the elution of anion exchange resins has not been reported.

C. Solvent Extraction

Extraction chromatography affords another means by which differences in stability constants of metal complexes can be exploited to effect the separation of transplutonium elements. The procedure consists in mixing an aqueous solution of metal ions with an organic solvent which contains a suitable complexing agent. The metal complex is thus extracted into the organic phase. This method has the advantage of speed as compared with ion exchange chromatography, and is therefore suitable for routine analysis. It is, however, less exact than ion exchange methods. A large number of organic solvents have been investigated in the development of this method. Only those that are widely used in analytical procedures will be mentioned.

1. Tributylphosphate

Tributylphosphate (TBP) is one of the oldest complexing agents, and was used originally for the purification of plutonium. Its usefulness in separation of transplutonium elements has been established by the work of many investigators. HESFORD et al. (1959) showed that the highest degree of extractability by TBP is obtained from nitric acid with high concentration of nitrate ion, and high concentration of TBP in the organic phase. Subsequent investigation by BEST et al. (1959) as well as studies by GRAY and THOMPSON (1952) and by BRANDSTETTER et al. (1964) demonstrated that higher separation factors can be obtained by

extracting from 12 M hydrochloric acid than from 13.1 M nitric acid. ISAAC et al. (1960) separated a mixture of americium and californium by this method. The most efficient organic solvent for TBP extractions is decane.

2. Thenoyltrifluoroacetone

Thenoyltrifluoroacetone (HTTA), a β -diketone, is used chiefly in separation of transplutonium elements from uranium, neptunium, plutonium, and fission products. MAGNUSON and ANDERSON (1954) have discussed its applicability to extraction of trivalent ions and have pointed out that extractability is inversely proportional to the third power of H^+ concentration in the aqueous phase. They have also shown that extraction constants of transplutonium elements are diminished in benzene and toluene, the most frequently used organic solvents, while VOJTÉCH and ŠPÍČEK (1961) have reported that oxygen-containing solvents increase extraction constants. SCHNECK (1967) has investigated the elation and extraction of trivalent actinides with various 1–3 beta diketones and has calculated stability constants for these elements under different conditions of chelation.

3. Organophosphoric Compounds

Attention has been directed to the use of neutral organophosphoric compounds as extractants of transplutonium elements by GUNZEV et al. (1964) who have investigated a number of such compounds and have concluded that their efficiency in effecting separations is influenced by the following factors: (1) the introduction of positive groups, such as an alkyl radical, enhances extractability—extractability is optimum with a 9 carbon radical chain—beyond this steric hindrance acts to reduce extractability; (2) introduction of a negative group, such as an aromatic group, reduces extractability; (3) extractability decreases in proportion to the number of C-O-P bonds. In the systems investigated by these authors, using decane as the organic solvent, highest extraction constants were found for both americium and curium with the compound $(C_9H_{17})_3PO$. Recently dialkylphosphoric and dialkylphosphonic acids have come into widespread use for group separation of transplutonium elements from lanthanides and for individual separation of transplutonium elements. The compounds that are most extensively employed are di(2-ethylhexyl)phosphoric acid (HDEHP) which is used in a system of toluene-1 M hydrochloric acid for transplutonium separations; and 2-ethylhexylphenylphosphonic acid (HEHOP) in a system of diethylbenzene-2 M hydrochloric acid. The advantages of these compounds as stated by STARÝ (1966) are their high degree of selectivity for the separation of transplutonium elements, and the fact that they can be used at low pH so that difficulties attributable to hydrolysis, which are experienced in other extraction systems, are avoided. FERRARD et al. (1959) have described the separation of californium, einsteinium, and fermium from americium and curium with HDEHP, and BAYBARZ (1962) reported a separation factor of 100 for californium and curium with HEHOP. BUTLER and HALL (1970) have demonstrated the superior effectiveness of dibutyl N,N-diethylcarbamylphosphonate (DDCP) for the separation of trivalent actinides. Unlike many other extractants, this compound is not pH dependent, and according to these authors its use results in higher recovery and greater precision (see Methods). Separation of individual transplutonium elements by extraction chromatography using HEDHP as the stationary phase has been reported by KOOT et al. (1964), HULER (1964), PIERCE and PECK (1962), STICKENSKY and SOCHOCKA (1964), BOSHOLM and GOSSE-ROYEN (1964), BUTLER (1965) HOROWITZ et al. (1969). In such systems the extractant is adsorbed in Celite or diato-

maceous earth, and dilute mineral acid is used to effect sequential elution of transplutonium elements.

D. Surface Adsorption

The phenomenon of adsorption of cations on the walls of laboratory glassware is well known. This surface adsorption is greatest at near neutral pH, and while it occurs to some extent with most cations, it is most marked in the case of lanthanide and actinide elements. The phenomenon of surface adsorption has been regarded as a problem to be taken into account in the storage and processing of solutions in glassware. It is mentioned here because it has been successfully exploited by EAKINS and GOMM (1968) as a method for the determination of actinide elements in biological materials (*vide infra*). From the work of LUESER (1965), MELISH et al. (1966), and of BENES and GARBA (1966), it has been determined: (1) that surface adsorption is independent of concentration up to concentrations of about 10^{-2} M, and that above this adsorption increases with concentration; (2) that adsorption is pH dependent, increasing markedly with increasing pH. These facts suggest that surface adsorption is in part due to an ion exchange mechanism dependent on dissociation of the $\equiv \text{SiOH}$ groups on the surface of glass, and to the hydrolytic behavior of the adsorbate with increasing pH.

III. Procedures Used in Bioassay

The chemical methods which have been discussed in the preceding section were developed for the most part for relatively large scale separations, and for the detection of high levels of radioactivity. In bioassay the situation is quite different. Chemical procedures require the separation of microgram or submicrogram amounts from very large amounts of other materials; the final preparation must meet the criteria for acceptable counting efficiency for very low levels of alpha activity.

All of the radiochemical procedures employed in bioassay programs depend on utilization of one or more of the principles which have been cited. Most of them, however, involve modifications of method designed to overcome the problems encountered in dealing with biological materials. Thus the radiochemical aspect of bioassay is an eclectic art. Many laboratories have developed procedures satisfactory for their purposes, but which are not used uniformly throughout the laboratories of any one country, much less of the world. Moreover, many of the procedures that are in use have not reached the world literature. For these reasons a questionnaire was sent to a large number of laboratories in preparation for the compilation of this review. The response to this questionnaire was most generous, and the kindness of the many respondents is gratefully acknowledged. Examination of the responses indicates that at this time the transplutonium elements command very little attention in routine bioassay programs. Nevertheless a number of methods for determination of transplutonium elements have been submitted. The following section presents a prototype method illustrating each of the principles embodied in Sec. II. A list of all laboratories that have contributed information pertinent to the transplutonium elements, and a brief description of methods involved, will be found in appendix 1. It will be noted that the methods that are described do not provide for individual separation of transplutonium elements. The need for such individual separation is largely obviated by the capability for identification of radioisotopes by alpha pulse height analysis.

A. Gross Alpha Methods

1. Precipitation (Schubert et al., 1951)²

- a) Dissolve the cooled pure white ash (see Chap. 13) as completely as possible by adding 5 ml of concentrated HNO_3 followed by 30 ml of distilled water. Rinse the speedy vap and the sides of the beaker with distilled water. Bring the contents of the beaker to boiling and, after cooling decant into a 90-ml pyrex centrifuge tube. If a large residue of undissolved material remains in the beaker, repeat this step and add the product to the centrifuge tube. Otherwise, rinse the beaker thoroughly with 2 N HNO_3 and add the rinsings to the centrifuge tube. Centrifuge for 10 minutes at 2000 rpm.
- b) Prepare a 250-ml beaker by placing in it a teflon magnetic stirrer and 2 ml of a saturated solution of SO_2 (6% sulfurous acid). This will reduce plutonium state. Carefully decant into the beaker the supernatant from Step 1, using extreme care to see that no solids are transferred. Use one extra beaker for the preparation of a reagent blank.
- c) To the residue remaining in the centrifuge tube from Step 2, add 30 ml of 2 N HNO_3 . Heat gently until fumes appear. Centrifuge for 5 minutes at 2000 rpm. Add this supernatant carefully to the contents of the beaker.
- d) Add 6 ml of 2 N HNO_3 to the residue remaining in the centrifuge tube and heat to boiling. Centrifuge for 5 minutes at 2000 rpm and add the supernatant to the material collected from Steps 2 and 3. Discard the precipitate.
- e) Titrate the combined supernatants, with stirring, to pH 1.7 with 50% NaOH, taking care to adjust the temperature gauge of the pH meter to reflect the actual temperature of the solution. Take the final pH reading when the temperature is 20 to 23° C. This titration should be carried out in an ice water bath.
- f) Decant the titrated solution into two 90-ml pyrex centrifuge tubes, keeping the volumes of the two tubes equal. Rinse the beaker with distilled water and add these rinses to the tubes.
- g) Immerse the tubes in a constant temperature water bath at 80 to 85° C and equip each tube with a mechanical stirrer. Equilibrate the temperature for 10 to 15 minutes with stirring, and then add 1 ml of concentrated H_3PO_4 followed by 1 ml of $\text{Bi}(\text{NO}_3)_3$ (100 mg Bi^{+++} /ml, dissolved in 6 N HNO_3). Stir for one hour.
- h) Remove the tubes from the bath, rinse the stirrers into the tubes with distilled water, and centrifuge for 5 minutes at 2000 rpm. Discard the supernatant.
- i) Transfer the precipitate from each tube into a 40-ml centrifuge tube. This is accomplished by breaking up the precipitate with a fine stream of distilled water and thoroughly rinsing the tube. Do not attempt to transfer the precipitate of more than one tube at a time. Save the large tube from which the transfer was made. Centrifuge the tube containing the precipitate for 5 minutes at 2000 rpm and discard the supernatant. Repeat these steps for the second large tube so that the precipitate from both of the large tubes will be combined in one 40-ml tube.
- j) To each of the large tubes in which the BiPO_4 precipitate was formed, add 4 ml of 6 N HCl. Swirl the tubes so that the acid is in contact with the walls of the tube, and then transfer into the tube containing the precipitate, taking care to see that any precipitate which may adhere to the walls of the smaller tube is washed down. Using a fine glass stirring rod, dissolve the precipitate completely in the acid. If any turbidity persists, add a few drops of concentrated HCl.

² This method as developed by the original authors has been modified as to minor details by many laboratories. The protocol given here describes the practice at Lawrence Berkeley Laboratory, Berkeley, California. Thorium, plutonium, actinium, neptunium and the transplutonium elements are recovered in this procedure.

k) To each tube add 0.3 ml of $\text{La}(\text{NO}_3)_3$ (containing 1.0 mg La^{+++} /ml), and 1 ml of concentrated hydrofluoric acid. Mix by gently swirling the tubes. Allow to stand for 8 to 10 minutes at room temperature. Centrifuge for 5 minutes at 2000 rpm and discard the supernatant.

l) Wash the precipitate once with about 10 ml of dilute hydrofluoric acid (1 ml concentrated $\text{HF}/100$ ml distilled water containing 2 ml 6 N HCl). Centrifuge immediately for 5 minutes at 2000 rpm and discard the supernatant.

m) Invert the tubes over several thicknesses of absorbent paper, and allow to drain for 15 to 20 minutes.

n) Add a few drops of distilled water to each tube and, using a capillary pipette equipped with a rubber bulb, break up the precipitate. Pipette the resulting slurry onto planchets of platinum or stainless steel ($1\frac{1}{2}$ " inner diameter, 2" outer diameter, depth $\frac{1}{8}$ "). Take care to distribute the slurry evenly over the surface of the planchet.

o) Dry the samples by means of an infrared lamp, adding water as necessary until all material in the tube has been transferred. When the sample is completely dry, flame to cherry red over a Fisher burner.

Recovery of americium is $95 \pm 5\%$, curium $85 \pm 5\%$.

2. Surface Adsorption (Eakins and Gornu, 1968)

a) Dissolve the white phosphate residue from alkaline phosphate precipitation (see Chap. 13) in 100 ml of 1 M nitric acid and heat on a hot plate for 40 min (see Note A).

b) Remove the beaker from the hot plate and add 5 ml of 1 M sodium sulphate solution (see Note B). Allow to stand for 5 min.

c) Transfer the solution to a 600 ml beaker and dilute to 500 ml with water. Adjust the solution to pH 5.0 with ammonia (see Note C).

d) Pour the solution through a glass fibre filter paper previously prepared (see Note D).

e) Wash the filter paper twice with 200 ml of water.

f) Elute the alpha activity with 50 ml of 6 M hydrochloric acid and two 10 ml water washes into a 250 ml beaker.

g) Add 2 glass beads to the solution in the beaker and boil down to a few ml.

h) Evaporate the solution to dryness on a platinum counting tray, using several water washes to ensure quantitative transfer to the tray. Flame the source and count in a suitably calibrated alpha counter.

Note A. The hot plate should be on "high" and up to temperature before the beaker is placed on it. Otherwise ensure that the nitric acid actually boils for 20 min.

Note B. If the presence of neptunium is suspected in the sample, 5 ml of 7 M hydroxylamine hydrochloride solution should be added instead of sodium sulphate and the solution boiled for a further 10 min.

Note C. Use ammonia solution (Sp. gr. 0.88) until the pH is between 2 and 3, then use 1 M ammonia solution added dropwise for the final pH adjustment.

Note D. A Whatman 9.0 cm GF/A glass fibre filter paper is placed on a Buchner funnel and washed with 100 ml of 6 M hydrochloric acid. It is then washed twice with about 10 ml of water and finally with 200 ml of water before use.

Recovery of americium and curium is in excess of 80%.

3 Lanthanum used in this procedure must be purified to avoid spurious counts. The method of purification is given in Appendix 2.

3. Anion Exchange (Henley, 1965)

a) Column preparation. The resin column is made by sealing a platinum tube, 0.5 mm inner diameter and approximately 1 inch long into the stem of a $2\frac{1}{2}$ inch pyrex funnel. Insert a small glass wool plug to hold the resin and fill the stem of the funnel with Dowex 2 \times 10, 50–100 mesh. Condition the resin with 10 M hydrochloric acid 0.01 M in nitric acid.

b) Column operation:

(1) The prepared sample (alkaline phosphate precipitation) is dissolved in 15 ml of 10 M hydrochloric acid 0.01 M in nitric acid⁴. If necessary use heat to bring about complete solution.

(2) Pass the solution over the prepared resin column. The flow rate is approximately 0.5 ml/min.

(3) Collect the effluent in a 100 ml beaker. Wash the column with 25 ml of 10 M hydrochloric acid and collect washing in the same beaker.

(4) Evaporate the effluent and wash to dryness. This fraction contains the trivalent actinide elements, lanthanides, the strontium-yttrium pair, and zinc.

(5) The dry residue from Step 4 may then be processed for alpha counting by one of the other gross alpha methods, or the transplutonium elements may be purified by cation exchange or solvent extraction. Recovery of californium by this method is reported as better than 90%.

(6) Plutonium, neptunium, protactinium, and uranium may be removed sequentially from the anion exchange column by suitable eluting agents.

B. Specific Actinide Determination (Low-Beer and Story, 1962)

For identification of activity detected in the gross alpha procedure or in Fraction 1 of Procedure II B., the following chromatographic method is used⁵.

1. Dissolve the lanthanum fluoride precipitate of Procedure II A. in 0.5 ml of 0.1 N HCl saturated with H_3BO_3 , and introduce onto a 3 mm \times 8 cm column of resin, Dowex 50 \times 4, 200–400 mesh in the hydrogen form.

2. Wash the column with 0.5 ml of 0.05 N HCl, followed by 0.1 ml of 2 N HCl. Discard the washings.

3. Elute by passing 0.1 ml of 2 N HCl through the column and follow with 1.5 ml of 20% ethanol saturated with HCl. This is made by bubbling HCl gas into a solution of 80 parts concentrated HCl and 20 parts absolute ethanol. Collect the entire eluate in one tube and bring the volume to 22 ml with distilled water.

4. Place the eluate on a 3 mm \times 5 cm column of resin, Dowex 1 \times 8, 200–400 mesh in the chloride form. Wash the column three times with 0.5 ml of 2 N HCl. Collect the effluent and all washings. Evaporate to dryness in a hot oil bath.

5. Dissolve the residue in 0.5 ml of 0.05 N HCl and introduce onto a column of resin, 3 mm \times 5 cm, Dowex 50 \times 4, 200–400 mesh in the hydrogen form, and operated at a constant temperature of 87.0° C. To maintain this temperature, the column is equipped with a glass jacket which is connected to a flask in which trichloroethylene is boiled under reflux. For best results the resin and all solutions applied to the column should be warmed just prior to use.

4 If analytical grade resin is used, nitric acid can be omitted from this solution. This is recommended for recovery of americium.

5 It is, of course, possible to identify α s by determining its rate of decay. Where two or more elements may be present in combination, studies of decay rates do not provide a satisfactory means of identification.

6. Wash the column with 0.65 ml of 2 N HCl and discard the washings.
7. Elute with 6 N HCl, collect drops 5 through 30 in a 10-ml beaker and evaporate to incipient dryness. Retain for electrodeposition.

C. Solvent Extraction with Bidentate Organophosphorus (Butler and Hall, 1970)

Residue of the wet ashing procedure for preparation of urine for analysis is dissolved in 8 N HCl and extracted with 10% triisooctylamin-oxylene (TIOA). The organic phase will contain plutonium, neptunium and uranium, while the trivalent actinides do not extract under these conditions. The aqueous phase which contains the trivalent actinides is evaporated to dryness. The aqueous phase HNO_3 is added to the residue and evaporated to dryness.

The beaker is allowed to cool to room temperature and 20 ml of distilled water is added, followed by 10 ml of concentrated HNO_3 . The beaker is then heated to near boiling, and 20 ml of concentrated HNO_3 is added. At this point solution will be complete, and H^+ concentration will be 11–12 N.

The solution is transferred to a 125 ml separatory funnel and the beaker is rinsed with two 10 ml volumes of concentrated HNO_3 . The rinses are added to the funnel. The solution is allowed to cool to room temperature and 1 ml of dibutyl N, N diethylcarbamyl phosphonate (DDCP) is added. The solutions are mixed vigorously for 10 seconds and the layers are allowed to separate for 30 minutes. The aqueous phase is drained from the funnel and discarded.

The organic phase is washed with 10 ml 12 N HNO_3 by shaking vigorously for one second, and allowing the phases to separate. The aqueous phase is drained and discarded.

Five ml toluene is added to the organic phase. This reduces the affinity of the actinides for DDCP and reduces the transfer of nonoxidizable phosphate to the strip solution.

Twenty ml of 2 N HNO_3 is added to the funnel and shaken vigorously for 10 seconds. After separation of the phases, the aqueous layer is drained into a 100 ml beaker. This step is repeated with a second 20 ml of 2 N HNO_3 .

The combined 2 N HNO_3 strip solutions are evaporated and the residue is either mounted on a platinum or stainless steel planchet for total alpha counting or electrodeposited for alpha pulse height analysis. Overall sensitivity of the method is 0.02 ± 0.01 dpm/sample.

Note. This procedure may be carried out on a 250 ml aliquot of a 24-hour urine sample.

IV. Detection of Radioactivity

When the identity of a radionuclide that may be present in a biological sample is known, or when only one radionuclide is known to be present, a count of total or "gross" alpha activity is adequate. For this purpose, the end product of the chemical procedure that has been employed to isolate the activity may be counted directly. When it is necessary to identify a radionuclide or to establish the relative activities due to two or more elements or isotopes, spectrometry must be invoked. Many alpha emitting nuclides have abundant gamma emissions of characteristic energy, and all have low energy photon spectra due to X-rays. These qualities, as well as the characteristic alpha energies of the transplutonium elements, may be used for their detection and identification.

A. Alpha Counting

Methods of alpha counting described in Chap. 13 apply to the transplutonium elements and are not repeated here.

1. Total Alpha Counting

Total or "gross" alpha counts are made on pulse or scintillation counters. Total alpha activity of the samples is calculated by:

$$\frac{(\text{net cpm of sample} \pm \sigma) \times 100}{\text{C.E.} \times \text{C.R.} \times \text{S.A.} \times \text{aliquot}} = (\text{dpm} \pm \sigma) \text{ whole sample.}$$

Nuclides which decay with a short half-life such as ^{233}Es , require that the observed count be corrected for decay:

$$\text{dpm}_t = \text{dpm}_0 \times e^{-\frac{k}{t}}$$

$$\text{dpm}_t = \text{count on day } t$$

$$\text{dpm}_0 = \text{count on day of excretion or ingestion}$$

$$k = 0.693$$

$$t = \text{interval from time 0 to time of count}$$

$$t_{1/2} = \text{radioactive half-life of the nuclide.}$$

2. Alpha Spectrometry

The transplutonium elements emit alpha particles with energies in the range of about 5 to 8 MeV. The alpha pulse height system described in Chap. 13 is used to identify these nuclides when they are present either alone or in combination. Pulse height analysis requires that the sample be electrodeposited on platinum or stainless steel.

a) Electrodeposition

Several methods for electrodeposition of transplutonium elements have been reported by a number of investigators. These methods apply as well to plutonium that has been reduced to the trivalent state. YAKOVLEV et al. (1957) developed one of the earliest procedures for electrodeposition of americium and curium; FUGER (1962) used aqueous solutions of EDTA as the plating solution; DONNAN and DUKES (1964) used a carrier technique. The method that has gained widest acceptance was reported by MITCHELL (1960). This procedure, which involves modifications of a number of earlier techniques, may be summarized briefly as follows:

1. The activity isolated by a chemical procedure such as ion exchange chromatography or solvent extraction is evaporated to dryness several times with hydrochloric acid. The residue is taken up in 1 ml of HCl and transferred to an electrodeposition cell with one or two washes of distilled water.
2. Volume is brought to 4 to 5 ml with ammonium chloride containing 0.1 to 0.2 grams of chloride per ml. A drop of methyl red is added, and the solution is made alkaline with concentrated ammonium hydroxide; 2 N HCl is added dropwise with stirring until the solution is just on the acid side.
3. The anode is placed so that its tip is within 5 mm of the cathode, and electrodeposition is carried on for 15 minutes with a current of 0.6 to 1 ampere. One minute before turning off the power, a few drops of concentrated ammonium hydroxide are added to the cell.

4. The cell is disassembled, and the cathode is rinsed with distilled water, acetone, and dried in air. It is flamed to cherry red, and is then ready for counting. Yields for americium and curium are 95 to 100% by this method.

5. Electrodeposition cells consist typically of a metal frame which holds the cathode (platinum or stainless steel), and a glass or lucite tower held in place by a gasket. The gasket size determines the area to be electrodeposited, which may be as small as 3 mm² or as large as 3 cm². With large area samples it is customary to use a Frisch grid in making spectrometric analyses as this provides collimation and greatly improves the resolution for such preparations. The anode is a platinum-iridium wire which in Mitchell's system is operated as a stirrer.

SEMENTSOVA (1962) investigated the use of nitric acid as a plating solution. A modification of the method suggested by ALLOWAY (1971) has been found very satisfactory at the Lawrence Berkeley Laboratory. The purified activity is evaporated to dryness several times in dilute nitric acid. It is taken up in 4 to 5 ml of 0.05 N HNO₃ and transferred to an electrodeposition cell with a plating area of 3 sq. mm. Plating is carried out for 50 minutes at 30 volts. The current does not exceed 120 milliamperes. At the end of the plating time 2 or 3 ml of concentrated ammonium hydroxide are added, and plating is continued for one minute. The cathode is removed, rinsed, and flamed as described above. Yields of 97 to 102% have been obtained for americium, curium, californium and einsteinium.

b) Monomolecular Layers

A procedure employing an alternative technique to electrodeposition has been developed by DEAL and CHANDA (1949). This consists in extracting the purified nuclide of interest into a 0.25 M solution of TTA in benzene. The nuclide is extracted from an aqueous solution of suitable pH (determined by consulting the extraction coefficients of POSKANZEN and FOREMAN (1961). Extraction is carried out by shaking the two phases in a 10 ml screw cap vial. The vial is then centrifuged to separate the phases and the upper organic layer is transferred by micropipette in small increments to a platinum planchet in which a small depression has been stamped. The planchet is dried by infrared lamp after each addition, and is finally flamed over a burner. The method results in rapid production of very satisfactory point sources suitable for high resolution alpha particle pulse height analysis. Its disadvantage lies in the fact that the transplutonium elements have different extraction coefficients and, therefore, a different pH adjustment is required for each of them. This limits the capability of the system to dealing with one nuclide at a time, whereas all the transplutonium elements behave similarly in the electrodeposition methods that have been described above.

B. Gamma Spectrometry

Because of the long range of gamma rays, many radionuclides can be detected by *in vivo* counting. Whole body counting has developed as a method of taking advantage of this phenomenon. The technique is applicable to nuclides that have abundant gamma emissions in the energy range above approximately 0.1 MeV. Some of the transplutonium elements are readily detected by whole body counting while others, including plutonium, are conspicuously lacking in the properties that make this feasible. Technological advances in recent years have revolutionized *in vivo* counting by opening the way to detection and identification of all radionuclides by means of their low energy photons. The entire subject of gamma spectrometry is presented in admirable detail by CROTHAMEL (1970).

1. Whole Body Counting

Development of a capability for *in vivo* gamma spectrometry was an early feature of the atomic age. One of the first applications of whole body counting to evaluation of human contamination by radionuclides was made at the Argonne National Laboratory by MILLER and MARINELLI (1950) who measured the radium content of residents of the Chicago area who had, at an earlier time, received radium for therapeutic purposes. The ensuing years were marked by great progress in the development of this technique, and whole body counting has become an essential component of a complete program for the protection of human beings from radiation hazard. The early history of this development has been traced by SRIENS (1962). Whole body counters are coordinated systems including a scintillator—plastic, liquid, or crystal; a photomultiplier tube; and a multichannel analyzer. According to a survey by MEIRL and RUNDO (1963), crystal scintillators have been used predominantly throughout the world, although liquid scintillators have been preferred by some laboratories. The latter have been described by VAN DILLA and ANDERSON (1962). The typical crystal scintillator is NaI activated by Tl. Its design and method of operation have been described by MAY and MARINELLI (1962). Counting efficiency is proportional to the dimensions of the crystal, and increases up to values of 12 and 4 inches for diameter and thickness respectively. The three major problems in the operation of whole body counters are background, geometry, and correction of observed counting rates for absorption. Background counts can be minimized by excluding all extraneous contributions by extensive shielding with lead-lined steel. However, background counts are also contributed by the crystal and these are proportional to its thickness. Constant geometry can be achieved by positioning all subjects in an identical manner. This is usually accomplished by using a reclining chair in which the trunk and torso of the subject form an arc, and the relationship of the body to the detector is the same for all subjects. Calibration with phantoms establishes the effect on count rate of absorption of a radionuclide in bone or soft tissue. When these conditions are observed, reproducible counts can be made, and peaks due to energies that are separated by at least 100 keV are readily distinguishable in 15 to 30 minute periods of counting.

Whole body counting has been used to measure the natural radioactivity in the body due to ⁴⁰K, and that which is due to ¹³⁷Cs—a radionuclide that has been distributed ubiquitously as a result of weapons testing. For rapid and direct evaluation of internal contamination by radionuclides that emit abundant gamma rays of high energy, whole body counting is the method of choice. Table 20.1 shows the detection limits of *in vivo* gamma spectrometry for some of the transplutonium isotopes.

Table 20.1. HEND et al. (1971)

Isotope	Maximum permissible lung burden (μCi)	Gamma photons (keV)	Minimum detectable amount in chest area (μCi)
Plutonium-239	1.6×10^{-2}	39 and 384	4×10^{-1}
Americium-241	1.5×10^{-2}	60	2×10^{-4}
Americium-243	1.6×10^{-2}	75	2×10^{-4}
Curium-244	1.4×10^{-2}	43	4×10^{-1}
Berkelium-249	12.0	320	1×10^2
Californium-252	4×10^{-3}	100	5×10^{-1}
Einsteinium-254	1.2×10^{-2}	63	4×10^{-3}

It will be seen that except for ^{241}Am , ^{243}Am , and ^{254}Es , detection limits exceed the maximum permissible burden. WRIGHT and PARKER (1971) have found that ^{252}Cf can be measured by gamma spectrometry if the gamma emission of the daughter fission products are utilized. These are in equilibrium with ^{252}Cf , and have energies in the range 100 to 800 keV, and abundance of approximately 34%. For such isotopes as ^{239}Pu , ^{240}Cm , ^{249}Bk , and ^{253}Es , however, the limitations of conventional whole body counting leave the bioassayist entirely dependent upon the indirect method of determining alpha activity in excreta.

The subject of whole body counting cannot be concluded without mention of the scintillator camera developed by ANGER (1966). PARKER and WRIGHT (1971) have demonstrated good agreement in detection limits and accurate localization for pure sources of ^{241}Am and ^{252}Cf counted in the whole body counter and by the Anger camera. Increasing distribution of the camera throughout the world should make it a useful alternative to the whole body counter for evaluation of appropriate radionuclides.

C. Low Energy Photon Spectrometry

Impetus for the use of low energy photon counting for *in vivo* counting was engendered by the limitations of conventional whole body counting for detection of ^{239}Pu . The principles of low energy photon counting are equally applicable in the study of transplutonium elements. HEIN *et al.* (1971) have shown that detection limits for many of these elements are markedly decreased when energies in the L X-ray range are measured with thin NaI scintillators.

Table 20.2. HEIN *et al.* (1971)

Isotope	X-rays (keV)	Minimum detectable amount in chest area (μCi)
Plutonium-239	17	1×10^{-2}
Americium-241	17	5×10^{-4}
Americium-243	17	3×10^{-3}
Curium-244	17	3×10^{-3}
Berkelium-249	~18	1×10^0
Californium-252	~19	3×10^{-3}
Einsteinium-254	~20	2×10^{-4}

PARKER *et al.* (1971) have used a counter consisting of two 5" by 3 mm NaI crystals horizontally opposed and mounted in a small animal counter to follow excretion and retention of ^{253}Es in mice. Counts were made of the 10 to 39 keV energy range, and although the mice had received doses of only 25 μCi , their retention and excretion were readily followed. After sacrifice, counts were made of skeletons, carcasses, and organs of interest, and these were found to be in good agreement with alpha determinations which were made on the same tissues and on the excreta. It is probable that the attenuation of counting rate by absorption in bone would preclude the use of this technique for *in vivo* counting of ^{253}Es in animals larger than the mouse. However, the effectiveness of the method for determining activity in excreta and isolated tissues has been clearly demonstrated.

V. Interpretation of Bioassay Data

The interpretation of bioassay results involving the transplutonium elements depends on models that have been developed to describe the metabolic behavior of plutonium (Chap. 13).

The great question that remains unanswered at this time concerns the applicability of the plutonium models to evaluation of contamination by transplutonium elements. Data from recent investigations (see Chap. 18) indicate that the transplutonium elements have greater mobility, and are excreted more rapidly than plutonium. The oxides of these elements appear to be more soluble in body fluids than those of plutonium, and the urinary to fecal ratios of excretion appear to increase as one goes toward the right of the actinide series. It is too soon to generalize from these observations, and the crying need of the moment is for more animal experiments, and for systematic study of any human beings who become contaminated. SNYDER (1971) has analyzed some of the recent data from animal experiments with americium and californium, and has concluded that while there are significant differences in excretion rates as compared with plutonium, these differences may be factors of only two to five and not orders of magnitude. Since the excretion rates of the transplutonium elements are in all cases higher than those of plutonium, some comfort may be found in the fact that interpretation based on the plutonium models will err on the side of caution when the models are applied to transplutonium metabolism.

Appendix 1

Laboratories reporting methods of determining transplutonium elements in biological materials

Laboratory	Elements of Concern	Method	Applications	References
Argonne National Laboratory	Am, Cm, Cf	sequential separation by solvent extraction with TIOA and HDEHP	urine, feces, blood sputum, nose blows	SEDLET (unpublished)
Atomic Energy Research Establishment, Harwell, United Kingdom	Am, Cm	glass adsorption (see text)	urine, feces, blood nose blows	EAKINS and GOMM (1968)
Dow Chemical Co., Rocky Flats, Golden, Colo.	Am	separation on cation exchange resin	urine, feces, sputum, blood	BOKOWSKI and ALLEN (1970)
E. I. du Pont de Nemours, Savannah, River Plant, Aiken, S. C.	Am-Cm, Cf, Es	solvent extraction with TIOA and DDCP (see text)	urine, feces	BUTLER (1965), BUTLER and HALL (1970)
Kernforschungszentrum Karlsruhe, Germany	Am, Cm, Cf	solvent extraction with HDEHP	all biological materials	SCHIEFER-DECKER (1968)
Lawrence Berkeley Laboratory, University of California	Am, Cm, Cf, Es	coprecipitation with LaF_3 followed by group separation by ion exchange (see text)	all biological materials	SCHUBERT et al. (1951), LOWBEER and STORY (1962)
Lawrence Livermore Laboratory, University of California	Cm	coprecipitation with LaF_3 -cation exchange separation	urine and feces	DUPZYK and BROGS (1960)
Los Alamos Scientific Laboratory	Am	separation on anion exchange resin	urine and feces	CAMPBELL and MOSS (1965)
Oak Ridge National Laboratory	trivalent actinides	separation of trivalent actinides on anion exchange resin followed by BiPO_4 and LaF_3 precipitation (see text)	urine and feces	SCHUBERT et al. (1951), HENLEY (1965)
Sandia Laboratory Albuquerque, N. M.	actinides other than U or Pu	electrodeposition from acid solution of ashed residue	urine	MITCHELL (1960)
Trapezo West, Richmond, Calif.	Am	extraction with HDEHP using Cm tracer. Final purification on ion exchange resin	urine	WEISSMAN et al. (1968)
U.S.A.E.C. Health and Safety Laboratory, New York, N. Y.	Am	LaF_3 coprecipitation-oxidation of Am by peroxodisulfate	urine, feces, tissues	MOORE (1963)
U.S.A.E.C. Health Services Laboratory, Nuclear Reactor Station, Idaho Falls, Idaho	Am, Cm, Cf	sequential extraction from $\text{Al}(\text{NO}_3)_3$ with aliquot (quaternary amine)	urine and feces	SILL (in preparation)
United States Testing Co., Richland, Washington	Am, Cm	solvent extraction with HDEHP	urine	BUTLER (1965)
University of Pittsburgh, Radiation Health Dept., Graduate School of Public Health	Am	solvent extraction with HDEHP	urine, feces, blood, tissues	HORM (in press)

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Appendix 2

Lanthanum Nitrate Purification

1. Place 10 g of lanthanum nitrate [$\text{La}(\text{NO}_3)_3 \cdot 6\text{H}_2\text{O}-\text{AR}$] in a 400 ml beaker and dissolve in 200 ml of distilled water.
2. Add 50 ml of ammonium hydroxide (NH_4OH 28%, sp. gr. 0.90) to the beaker and stir.
3. Transfer the solution to four 80 ml centrifuge tubes. Rinse the beaker with distilled water and add the washings to the tubes to give equal volumes. Centrifuge at 2000 rpm for 5 minutes. Discard the supernatant fluid.
4. Add conc. nitric acid, with stirring, to Tube 1 until the precipitate is just dissolved. Transfer the clear solution to Tube 2. Rinse Tube 1 with 2 to 3 ml of conc. nitric acid and add to Tube 2. Stir and add conc. nitric acid, if necessary, until the precipitate is just dissolved. Transfer the solution to Tubes 3 and 4 in the same manner. Transfer the combined solutions in Tube 4 to four clean 90 ml centrifuge tubes. Divide the solution to give equal volumes.
5. Add 10 ml of ammonium hydroxide to each tube and stir. Centrifuge at 2000 rpm for 5 minutes and discard the supernatant.
6. Repeat Steps 4 and 5.
7. As in Step 4, add conc. nitric acid with stirring to Tube 1 until the precipitate is just dissolved. Transfer the clear solution to Tube 2. Rinse Tube 1 with 2 to 3 ml of conc. nitric acid and add to Tube 2. Stir and add conc. nitric acid, if necessary, until the precipitate just dissolves. Transfer to Tubes 3 and 4 in the same manner. Transfer the clear solution to a 250 ml graduated cylinder. Rinse the centrifuge tubes with 2 to 3 ml distilled water and add to the solution in the cylinder.
8. Add distilled water to the solution to give a total volume of 160 ml. Stir and transfer to a glass-stoppered bottle. This gives a solution containing 20 mg of La^{+3} per milliliter. Dilute stock solution with 6 N HNO_3 to give a solution containing 1 mg La^{+3} per ml.

TIOA Purification

1. Filter tri-isooctylamine (TIOA) through glass wool before use to remove solids.
2. Add 50 ml TIOA to 50 ml xylene in a 250 ml separatory funnel. Add 100 ml 8 N HCl, shake gently, vent, shake 1 minute, vent (there will be some heat evolution). Let phases separate (about 5 min). Organic phase will turn red. Draw off the lower acidic (aqueous) layer and discard.
3. Add 50 ml 8 N HCl, add 1 ml 2 M NaNO_2 (sodium nitrite), shake for 1 minute. (Organic layer turns dark red-brown.) Let phases separate, draw off and discard lower layer.
4. Add 50 ml 8 N HCl, add 5 ml 30% H_2O_2 (hydrogen peroxide), shake gently, vent, shake 3 minutes, vent after each minute. Let phases separate (very cloudy), draw off and discard lower layer. [Heat and (Cl_2) chlorine evolution.] Repeat Step 4.
5. Add 50 ml 8 N HCl, shake 1 minute, let phases separate, drain and discard lower layer.
6. Add 50 ml 0.1 N HCl, shake 1 minute, let phases separate, drain and discard lower layer, repeat Step 6.
7. Add 50 ml deionized water, shake for 1 minute, let phases separate, drain and discard lower layer.

8. Add 50 ml 8 N HCl, shake for 1 minute, let phases separate, draw off and discard lower layer, repeat Step 8.
9. Drain organic phase into a 600 ml beaker, add 372 ml xylene (to dilute to 10% (w/w) TIOA-xylene). Let stand covered overnight for cloudiness to clear and layers to separate. Decant into a 500 ml glass stoppered storage bottle.

References

- ALLAWAY, D.: Personal communication 1971.
- ANGER, H. O.: Sensitivity, resolution and linearity of the scintillation camera. *Trans. Nucl. Sci.* 13, 380-392 (1966).
- AUER-WEISBACH, H., BILSTERN, H., MÜLLER, R.: Chromatographische Trennung von Curium-242 und Americium-241 und die spektroskopische Überprüfung ihrer α -Aktivität. *Mh. Chem.* 98, 61-67 (1967).
- BAZARZ, D. D.: Separation of transplutonium elements by phosphonate extraction. Oak Ridge National Laboratory Report ORNL-3273 (1962).
- BENES, P., GARBA, A.: A radio-tracer study of manganese adsorption on glass from very dilute aqueous solutions. *Radiochem. Acta* 5, 99-104 (1966).
- BEST, G. F., HESFORD, E., MCKAY, H. A. C.: Tri-n-butyl phosphate as an extracting agent for inorganic nitrates. *J. Inorg. Anal. Chem.* 12, 136-140 (1959).
- BOSHUIJL, J., GOSSE-RUYKEN, H.: *J. prakt. Chem.* 26, 83-89 (1964).
- BRANDSTETTER, J., WANG, T., GABRILOV, K. A., GWOZDZ, E., MADY, J., TAUBE, M.: Extraction properties of ferrium and mendelevium. *Radiochim. Acta* 6, 22-30 (1964).
- BROWN, K. B.: Extraction of lanthanide and transplutonium elements by dialkyl phosphoric acid and amines. Chemical Technology Division, Chemical Development Section C, Progress Report on Separation Chemistry and Separation Research, Jan.-June, 1963, ORNL-3496.
- BUTLER, F. E.: Determination of uranium and americium-curium in urine by liquid ion exchange. *Analyt. Chem.* 37, 340-342 (1965).
- BUTLER, F. E., HALL, R. M.: Determination of actinides in biological samples with bidentate organophosphorus compounds. *Analyt. Chem.* 42, 1073-1076 (1970).
- CHOPPIN, G. R., MAY, D., HOLM, L. W.: Ion exchange studies of alpha-hydroxy carboxylic acid-lanthanide and actinide systems. In: *Radioisotopes in the physical sciences and industry*, vol. III, p. 283-299. Vienna: IAEA 1962.
- COLEMAN, J. S., PENNEMAN, R. A., KEENAN, T. K., LAMAR, L. E., ARMSTRONG, D. F., ASHLEY, L. B.: An ion exchange process for gram scale separation of americium from rare earths. *J. Inorg. Nucl. Chem.* 3, 327-328 (1956).
- CROUTHAMER, E. E.: Applied gamma ray spectrometry, 2nd ed. (ADAMS and DAM, eds.). New York-Oxford: Pergamon Press 1970.
- DEAL, R. A., CHIANDA, R. N.: A rapid source preparation technique for high resolution alpha particle spectroscopy. *Nucl. Instr. Meth.* 69, 88-92 (1969).
- DIAMOND, R. M., STREET, K., JR., SEABORG, G. T.: An ion exchange study of possible hybridized bonding in the actinides. *J. Amer. chem. Soc.* 76, 1461-1469 (1954).
- DOSBOS, R. L.: Americium poisoning—therapy of radioelement poisoning. ANL-5584, p. 28-35 (1955).
- DONNAN, M. Y., DUKES, E. K.: Carrier technique for quantitative electrodeposition of actinides. *Analyt. Chem.* 36, 392-394 (1964).
- DREXLER, G., FEIZL, F.: Spectrometry of low-energy γ and x-rays with Ge(Li) detectors. *Nucl. Instr. Meth.* 48, 332-334 (1967).
- EAKINS, J. D., GOMM, P. J.: The determination of gross alpha activity in urine by adsorption on glass filter paper. *Hith Phys.* 14, 461-472 (1968).
- FITE, S., HENDER, C. F.: X-ray critical-absorption and emission energies in keV. In: *Radiological health handbook*, Rev. ed., p. 162. U.S. Department of Health, Education and Welfare, Public Health Service, 1970.
- FOREMAN, H., MOSS, W., ENKERTER, B. C.: Clinical experiences with radioactive materials. *Amer. J. Roentgenol.* 79, 1071-1079 (1958).
- FUGERT, J.: Ion exchange behavior and dissociation constants of Am, Cm, and Cf complexes with EDTA. *J. Inorg. Nucl. Chem.* 5, 332-338 (1959).
- FUGERT, J.: Preparation of thin electrodeposits of actinides from aqueous solutions of EDTA. *Bull. Soc. chim. Belg.* 71, 134-141 (1962).
- GATTI, R. C., PHILLIPS, L., SIKKELAND, T., MUCA, M. L., THOMPSON, S. G.: Ion exchange behavior of mendelevium. *J. Inorg. Nucl. Chem.* 11, 251-253 (1959).
- GRAY, P. R., THOMPSON, S. G.: Lawrence Radiation Laboratory, Berkeley, Chemistry Division Quarterly Report, Sept.-Nov., 1952, UCRL-2098.
- GUREEV, E. S., DEDOV, V. B., KARPACHAVA, S. M., LEBEDEV, I. A., SAVERSOV, I. D., YAKOLEV, M., RYZOV, N., TRUCHLAYEV, P. S.: Proc. Third Int. Conf. Peaceful Uses of Atomic Energy, p. 553-560. Geneva: IAEA, 1964.
- HARLEY, J. H.: Sampling and analysis for assessment of body burdens. In: *Assessment of radioactivity in man*, vol. 1, p. 155-167. Vienna: IAEA 1964.
- HARRIS, D. H., TOMPKINS, E. R.: Separations of several rare earths of the curium group. *J. Amer. chem. Soc.* 69, 3792-3800 (1947).
- HENLEY, L. C.: Urinalysis by ion exchange. Proc. 11th Annual Bioassay and Analytical Chemistry Meeting, Albuquerque, N.M., 1965, Conf.-651008, Biology and Medicine, USAEC TID-4500, p. 1-19.
- HESFORD, E., JACKSON, E. E., MCKAY, H. A. C.: Tri-n-butyl phosphates as an extracting agent for inorganic nitrates—VI. *J. Inorg. Nucl. Chem.* 9, 279-289 (1959).
- HILL, O. F., COOPER, V. R.: Scale-up problems in the Pu separations program. *Ind. Eng. Chem.* 50, 399-402 (1958).
- HOROWITZ, E. P., BLOOMQUIST, C. A. A., HENDERSON, J. D.: The extraction chromatography of californium, einsteinium and fermium with di(2-ethylhexyl)-orthophosphoric acid. *J. Inorg. Nucl. Chem.* 31, 1149-1166 (1969).
- HULET, E. K.: An investigation of the extraction chromatography of Am (VI) and Bk (IV). *J. Inorg. Nucl. Chem.* 26, 1721-1726 (1964).
- HYDE, E. K.: Radiochemical separations of the actinide elements. In: *The actinide elements. National Nuclear Energy Series Div. IV*, vol. 14A, p. 542-595 (SEABORG and KATZ, eds.). New York: McGraw-Hill 1954.
- ISAAC, N. M., WILKINS, J. W., FIELD, P. R.: Separation of transcurium elements from large quantities of Cm by liquid-liquid extraction. *J. Inorg. Nucl. Chem.* 16, 151-157 (1960).
- KETZEL, B. H., BOYD, G. E.: Exchange adsorption of ions from aqueous solutions by organic zeolites. IV. Separation of the Y group rare earths. *J. Amer. chem. Soc.* 69, 2800-2812 (1947).
- KOOL, J., BODEX, R., WIKSTRA, J.: Separation of Am(Cm), Bk, and Cf by extraction chromatography. *J. Inorg. Nucl. Chem.* 26, 2300-2302 (1964).
- LAWIROSKI, S.: Survey of separations process other than solvent recovery. *Chem. Eng. Prog.* 51, 461-466 (1955).
- LEDBETTER, C. M., HOLLANDER, J. M., PEULMAN, I.: Table of isotopes, 6th ed. New York: John Wiley & Sons, Inc. 1967.
- LESER, K. H.: Kationenaustausch und Adsorption von Radionukliden an Glasoberflächen. *Radiochim. Acta* 4, 225-227 (1965).
- LOW-BEER, A. DE G., STORV, T. L., JR.: A method for determining low level alpha activity from Am, Cm and Cf in biological materials. Proc. 8th Annual Bioassay and Analytical Chemistry Meeting, DP-831, p. 58-63 (1962).
- MAGNUSON, L. E., ANDERSON, M. L.: Chelation of the +3 ions of elements 95 through 100 with thiophenyltrifluoroacetone. *J. Amer. chem. Soc.* 76, 6207 (1954).
- MARCUS, Y., GIVON, M.: Anion exchange of metal complexes XIII the actinide (III)-nitrate system. IAR (1962).
- MAY, H. A., MARINELLI, L. D.: Sodium iodide systems: Optimum crystal dimensions and origin of background. In: *Whole body counting*, p. 15-36. Vienna: IAEA 1962.
- MEHL, H. G., RUNDGO, J.: Preliminary results of a world survey of whole body monitors. *Hith Phys.* 9, 607-614 (1963).
- MEALISH, C. E., HILL, M. R., GLANVILLE, D. E.: UKAEA Report AERE-R-5323 (1966).
- MILLER, C. E., MARINELLI, L. D.: ANL-4531 (1950) 77 pages.
- MIRCHEL, R. E.: Electrodeposition of actinide elements at tracer concentrations. *Analyt. Chem.* 32, 326-328 (1960).
- MOORE, F. L.: Separation of Am from other elements: Application to the purification and radiochemical determination of Am. *Analyt. Chem.* 35, 715-719 (1963).
- MUELLER, W., FUGERT, J., DUYCKAERTS, G.: Complex formation in tertiary amine extraction of trivalent metals. 8th Int. Conf. on Coordination Chemistry, Vienna (1964), Euratom 2169e.
- National Council on Radiation Protection and Measurements Reports No 33 (1968) and No 39 (1971), Washington, D.C.
- National Research Council, National Academy of Science: The radiochemistry of americium and curium. NAS-NS-3006 (1960).
- National Research Council, National Academy of Science: The radiochemistry of the transcurium elements. NAS-NS-3031 (1960).
- PARKER, H. G., WRIGHT, S. R.: Whole-body counting of ^{241}Am and ^{242}Cf with the Anger camera. *Health Phys.* 22, 891-898 (1972).

- PARKER, H. G., WRIGHT, S. R., LOW-BEER, A. DE G., YABOER, D. J.: The metabolism of ^{239}Pu in mice. *Health Phys.*, **22**, 641-652 (1972).
- PEPPARD, D. F., MASON, G. W., DRISCOLL, W. J., MCCARRY, S.: Application of phosphoric acid esters to the isolation of certain transplutoniums by liquid-liquid extraction. *J. Inorg. Nucl. Chem.* **12**, 141-149 (1959).
- PERLMAN, I., STREIBER, K., JR.: The chemistry of the transplutonium elements. In: *The actinide elements*, National Nuclear Energy Series Div. IV, vol. 14A, p. 507-541 (SEABORG and KATZ, eds.). New York: McGraw-Hill 1954.
- PIERCE, T. B., PECK, P. F.: Use of di(2-ethylhexyl) orthophosphoric acid for the separation of the rare earths by reverse phase partition chromatography. *Nature (Lond.)* **195**, 597 (1962).
- POSKANZER, A. M., FOREMAN, B. M., JR.: A summary of TTA extraction coefficients. *J. Inorg. Nucl. Chem.* **16**, 323-336 (1961).
- ROWLAND, R. E., MILLER, E. C., MARINELLI, L. D.: An americium accident. *ANL-5518*, p. 46-48 (1956).
- SCHIEFERDECKER, H.: A method for separation of Am, Cm and Cf. KFK-80 (1908).
- SCHUECK, H.: Complexing and extraction of trivalent actinium, americium, curium and californium with acetyl acetone and several of its derivatives. *Kernforschungszentrum, Karlsruhe KFK-672*, 83 pages (1967).
- SCHUBERT, J., MYERS, L. S., JR., JACKSON, J. A.: Analytical procedures of the Bioassay Group at the Argonne National Laboratory. *ANL-4509* (1951).
- SEABORG, G. T.: Correlation of properties of actinide transition series. In: *The actinide elements*, National Nuclear Energy Series Div. IV, vol. 14A, p. 733-768 (SEABORG and KATZ, eds.). New York: McGraw-Hill 1954.
- SEABORG, G. T., JAMES, R. A., GHORSO, A.: The new element curium (atomic number 96). In: *Transuranium elements*, National Nuclear Energy Series Div. IV, vol. 14B, p. 1554-1585 (SEABORG and KATZ, eds.). New York: McGraw-Hill 1949a.
- SEABORG, G. T., JAMES, R. A., MORAN, L. O.: The new element americium (atomic number 95). In: *Transuranium elements*, National Nuclear Energy Series Div. IV, vol. 14B, p. 1525-1553 (SEABORG and KATZ, eds.). New York: McGraw-Hill 1949b.
- SEMENTSOVA, A. K.: Electrolytic precipitation of Am and Cm from their aqueous solutions onto a Pt cathode. *Radiokhimiya* **4**, 669-671 (1962).
- SIKORSKI, S., SOCHACKA, R. J.: Reversed phase partition chromatography with IDEHP as the stationary phase. Part I. Separation of rare earths. *J. Chromatogr.* **16**, 376-384 (1964).
- SIL, C. W.: Separation and radiochemical determination of uranium and the transuranium elements using barium sulfate. *Health Phys.* **17**, 89-107 (1969).
- SNYDER, W. S.: Mathematical models for internal dose-americium and californium. Presented at Annual Health Physics Society Meeting, July 1971, New York.
- SPIERS, F. W.: Whole-body counting: An introductory review. In: *Whole body counting*, p. 3-12. Vienna: IAEA 1962.
- STARÝ, J.: Separation of transplutonium elements. *Talanta* **13**, 421-437 (1966).
- STREIBER, K., JR., HIGGINS, G. H., SEABORG, G. T.: The separation of americium and curium from the rare earth elements. *J. Amer. chem. Soc.* **72**, 2790-2797 (1950).
- SURLS, J. P., CHOPPIN, G. R.: Equilibrium absorption of lanthanides, americium and curium on Dowex 50 resin. *J. Amer. chem. Soc.* **79**, 855-859 (1957).
- THOMPSON, S. G., HARVEY, B. H., CHOPPIN, G. R., SEABORG, G. T.: Chemical properties of elements 99 and 100. *J. Amer. chem. Soc.* **76**, 6229-6236 (1954).
- THOMPSON, S. G., MORGAN, L. O., JAMES, R. A., PERLMAN, I.: The tracer chemistry of americium and curium in aqueous solutions. In: *The transuranium elements*, National Nuclear Energy Series Div. IV, vol. 14B, p. 1339-1362 (SEABORG and KATZ, eds.). New York: McGraw-Hill 1949.
- U. S. Atomic Energy Commission: *Californium-252*. Proc. of a Symposium American Nuclear Society, New York, 1968. Conf. 681032, p. 41.
- VAN DILLA, M. A., ANDERSON, E. C.: Human counters using liquid scintillators. In: *Whole body counting*, p. 41-58. Vienna: IAEA 1962.
- VOJTECH, O., SPIEGEL, V. I.: Dokl. Akad. Nauk. SSSR **136**, 339-341 (1961).
- WERNER, L. B., PERLMAN, I.: The preparation and isolation of curium. In: *Transuranium elements*, National Nuclear Energy Series Div. IV, vol. 14B, p. 1586-1654 (SEABORG and KATZ, eds.). New York: McGraw-Hill 1949.
- WRIGHT, S. R., PARKER, H. G.: Unpublished material (1971).
- YAKOVLEV, G. N., CHULKOV, P. M., DEDOV, V. M., KOSYKOV, V. N., SOBELEV, Y. P.: The preparation of thin films of Pu, Am, and Cm by an electrolytic method. *J. Nucl. Energy* **5**, No 1, 159-161 (1957).

Women's History Month

Dettner recalls a life of service

Biologist helped build careers during Great Depression, set up bio-assay lab at LBL

By Cindy Cassidy

A devotion to science and community involvement are the hallmarks of Anne Dettner's life, a retired biochemist from the Berkeley Radiation Laboratory who spoke here Tuesday in honor of Women's History Month.

Dettner began the bio-assay laboratory at LBL under the direction of John Lawrence in 1955, did extensive research over the years on the effects of radioactive isotopes on animals and humans, was president of the League of Women Voters in 1932, and was appointed Director of the National Youth Administration (NYA) program for California during the depression.

"I am astounded and delighted with the large group of women in



Photo by Bryan Quintard

Anne Dettner

significant positions here," said Dettner. "In my day, women doing significant work could have met in

a telephone booth."

Though she graduated from UC Berkeley in 1926 with a bachelor's degree in biology, Dettner felt she had no marketable skills. She knew she wanted to work in biochemistry from taking the one course that was offered, but there was no such major at the time.

Dettner credits

Dr. Harry Wykoff, a clinical pathologist and hematologist at the Stanford Medical Center who taught her how to run a clinical laboratory, for initiating her career.

As the Great Depression was beginning, Dettner also

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DETTNER*Continued from page 1*

became very involved in the League of Women Voters. The league helped pass a San Francisco bond issue that assisted displaced persons. She was later appointed by the governor to the State Emergency Relief Commission. In this capacity she visited Washington D.C. to find out how President Roosevelt's New Deal approach would affect California.

There she met Harry Hopkins, who offered her the California state directorship of the NYA Program, a program to keep young people in school and to find community project work activities for them, paid for by the government.

"President Roosevelt took a different approach to unemployment. He felt it wasn't because of people's weaknesses, but because of the economic times that they were out of work," Dettner told the audience. "His programs, developed for adults, gave dignity as well as employment to people. They provided a different feeling to people than just giving hand-outs."

Though she had to give up her work at the Stanford Medical Center for four years to run the NYA program, Dettner said she felt it was an emergency and she was called upon for the country; she had an obligation to help out.

Eleanor Roosevelt visits

During those years Eleanor Roosevelt made semi-annual visits to California to observe the progress of the NYA program. "It was my happy lot to tour the NYA programs with her," said Dettner. "Mary McLeod Bethune, the first black woman appointed to a significant



Photo by Bryan Quintard
Assistant to the Deputy Director Carol Alonso visits with Anne Dettner.

federal job, the director of the Division of Negro Affairs, also came. The work projects were all segregated then. We had to call ahead to find restaurants in the different towns where we could all eat together without being embarrassed."

Bethune was born into slavery, said Dettner, and later started a school for young black women to be trained as secretaries, doing a tremendous service for those who attended. "We became great friends and went all over the state together."

Dettner said the NYA programs were a tremendous morale builder for those who participated, giving them the education and skills needed for private employment later.

"Today, I think if only we had NYA programs again, we'd have far fewer gangs, violence and resentment. Violence is due to hopelessness. This could be avoided in Roosevelt's point of view," she said.

When her work with the NYA was over, Dr. Wykoff recommended Dettner for a position at LBL, where she initially worked on studying the effect of neutron therapy on termi-

nally ill cancer patients.

The studies were conducted to test the effect of neutrons on human tissue. The results were of little help to those terminally ill patients who took part in the testing.

Happy outcome

In 1941, an outstanding radiologist and researcher, Dr. Bela Low-Beer from Prague visited the United States to do studies at the Berkeley lab on the tolerable doses of radioactive isotopes on animals. Dettner worked extensively with him, and ended up marrying him in 1944.

"It was a very happy outcome of a scientific experience," said Dettner.

During this time, Dettner was drafted to the War Manpower Commission recruiting women for war industries.

Later, she received a research fellowship in radiology at the UC

medical school.

After returning from a sabbatical in Europe in 1951, it was discovered that her husband had leukemia. "He was very productive in those years as he allowed himself no distractions. He died in 1955," said Dettner.

Shortly thereafter, John

Lawrence asked her to start the bio-assay lab at Berkeley and she worked there until her retirement in 1972. "I couldn't imagine life without a laboratory to go to, so fortunately I was invited to accept a consultantship in which I did some studies on carbon 14 and the environmental condition of the land around LBL."

In 1979 Dettner married again, "much to everyone's surprise," to a life-long friend, Dr. George T. Dettner. They remained together until his death in 1992.

During her years at LBL, Dettner said there was a considerable flocking to LBL for treatment with P32 for blood dyscrasias patients. "P32 did nothing to prolong life, but made it more bearable. Many of the symptoms disappeared. It engendered great hope, but studies show that the length of life for those who had it and those who didn't was the same — four years, eight months."

"I am overwhelmed at the facilities and equipment you have now for determining exposures to radiation," said Dettner. "I feel I've come from the dark ages, such tremendous progress has been made. But, I'll always be extremely grateful for my experiences at LBL."

Alumnae Resources
Annual WAVE Luncheon

Women
of Achievement,
Vision
and Excellence

Welcome

Maria E. Gallo
Chair, Alumnae Resources Board of Directors

Lunch

Audiovisual Program *The 1995 WAVE Honorees*

Underwritten by Genentech, Inc.

Produced by The Studio of David Inocencio/Minette Siegel

Narration by Nina Totenberg, *National Public Radio*

WAVE Award Presentations

Concluding Remarks

The 1995 WAVE Honorees

Each year, the WAVE Award is presented by Alumnae Resources to five exceptional women over the age of 70 who exemplify achievement, vision and excellence. Through their leadership and pioneering spirit, they have made significant contributions to their communities in a wide spectrum of areas, including the arts, business, education, human services, and social policy. Alumnae Resources warmly congratulates this year's WAVE Award recipients as they join the distinguished circle of WAVE Honorees chosen each year since 1983. We thank them for their wisdom, their courage and their inspiration. ➤



Barbara Bernie ➤ A leading advocate for the practice of Chinese medicine and the licensure of acupuncture in the U.S., she has helped establish high standards in the field, and has created bridges between countries and communities through her outstanding research, practice and concern for others.



Anne deGruchy Dettner ➤ In an exceptional career that has spanned the civic, social welfare and "hard science" fields, she administered relief programs during FDR's presidency, joined a Lawrence Laboratory team doing ground-breaking medical research, and continues her lifelong involvement with the community.



Certificate of Recognition

On behalf of the people of the
City and County of San Francisco
I am pleased to commend and thank
Anne deGruchy Dettner

For extraordinary leadership in her community with experiences ranging from civic involvement during Franklin D. Roosevelt presidency to cutting-edge medical research at the Lawrence Laboratory.

May 17, 1995



IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the City and County of San Francisco to be affixed.

Frank M. Jordan
Frank M. Jordan
Mayor

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