Impact Los Alamos: Traditional New Mexico in a High Tech World, Overview of project and Symposia

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New Mexico, The Land of Enchantment, is a land of contrasts. While the state possesses some of the most desolate regions in the continental United States, it also enjoys some of the most fertile agricultural areas, found along the Rio Grande. Home to both Clovis man, who may represent humanity’s earliest prehistory in this part of the world, and the Anasazi, one of the oldest cultures known, New Mexico is the site of the first successfully launched particle beam and is the birthplace of the atomic age. Within the space of a few hundred miles, its vast northeastern plains meld into the lower ranges of the majestic Rocky Mountains. The fifth largest state in the union, it is also among the five poorest. The Peace Corps once used Chama and Taos in northern New Mexico to train recruits headed for the Third World because these towns most resembled the structural poverty trainees would encounter in their destined place of service. Santa Fe, on the other hand, has one of the highest concentrations of conspicuous wealth in the world and has become a playground for the rich and famous. New Mexico has one of the poorest educational systems in the country, yet its smallest county, Los Alamos, offers its youngsters one of the best educations available in the United States and boasts one of the highest concentrations of Ph.D.s in the world. The contrast between the country’s most advanced scientific and technological culture and traditional village culture formed the basis of our study entitled “Impact Los Alamos: Traditional New Mexico in a High Tech World.” The project covers the period 1943 to 1993, the time between the origin of Los Alamos and its fiftieth anniversary.
In late 1993, the University of New Mexico Oral History Program launched this research project to document both change and continuity in northern New Mexico. We wanted to know how contact between Los Alamos National Laboratory (LANL) and the surrounding communities has affected the individual, familial, and village lives of those who built the labs, maintained them, and provided personnel in the technical fields of advanced research. Has science benefitted or eroded local culture? Has advanced education preserved or destroyed tradition? In short, has traditional New Mexico benefitted from high technology, or have we merely become a hi-tech, low-brow mecca of “Santa Fe style?”

New Mexico increasingly resembles the California of the early 1960s; that is, a place where Americans come to “start over” or run away from personal failure, congestion, crime, urban blight, or tired social infrastructures. Many native New Mexicans wonder: “What will become of our way of life where openness, friendliness, and hospitality are taken as signs of quaint backwardness or weak competitiveness?” No part of the state offers a better laboratory to study this contrast of cultures than Los Alamos and the surrounding region.

“Impact Los Alamos” addresses diverse subjects. From Hispanic homesteaders who lost their land to the new scientific, quasi-military installation during World War II, and from the early laborers and security personnel to the more recent service and technical workers, the study shed light on the impact Los Alamos has had on the personal, familial, and communal lives of native New Mexicans. The project examined how their experience of working on “The Hill” affected their individual, cultural, and social values, their family’s internal development, and their standing in the community. In a part of the country where community once meant everything—what has changed and what has persisted?

It should be made clear that this is only an exploratory study that needs many more interviews and a much expanded interviewee sample. It is a much needed beginning, however, and the work continues. We continue to build a pool of interviewees that represents the fifty-plus-year history of the lab, selected by gender, job description, work experience, and place of residence. Beginning in 1991, we interviewed ten employees of LANL who daily commuted from the village of Chimayó. The newly established UNM Oral History Program conducted the interviews that were intended for New Mexico’s exposition in the “American Encounters” exhibit at the National Museum of American History in Washington, D.C. We questioned these people about existing in two distinct cultures and the contrasts they experienced as they moved from earning their livelihood to living in their traditional community.
We pursued their sometimes "schizophrenic" encounters with neighbors and colleagues at work, and how they learned to reconcile the two. We explored the survival strategies required for working in a culture that rewards change and innovation while living in a culture that has promised survival in a harsh land through adherence to tradition, patience, and continuity. With the help of the New Mexico Endowment for the Humanities, we designed a longitudinal study which, when completed, will offer rich primary materials for historians, folklorists, linguists, and anthropologists interested in how scientific culture affects traditional ways of life.

Oral history has become an increasingly popular method of uncovering the history and roles of discrete groups that have traditionally been overlooked in the writing of history. This research method can document both objective facts and subjective motives. It can offer insight into the closed world of private and personal relationships and how they affect public actions. It can color and add perspective to seemingly straightforward events and actions. Often it does not present us with a linear narrative of events because oral discourse does not occur that way. Usually one must allow oral discourse to meander to its own rhythm and cadence. However adept the interviewer may be as a guide through the subject matter of an interview, the odyssey through a life history or career study often moves in fits, starts, and skips from topic to topic in a logic all its own. In fact, oral history may be the best way to appreciate the complexity of human discourse.

Oral history research rarely stands alone, nor should it. It should be based on solid and rigorous archival research and should incorporate all extant or available work on the subject under investigation. Then, standing on this foundation, it should attempt through its qualitative nature to delve further and reveal the truth behind the given facts. The UNM Oral History Program has worked hard to train student interviewers in developing their intuitive and cognitive skills. It is clear that nothing can replace good interpersonal skills, empathy, rapport, the talent for listening, and the ability to articulate an inquiry—whether using the proverbial "two-sentence question" or the exploratory "probe" that conjures up ever richer material from the recesses of memory. The interviewer cannot solely depend on the interview question set as the principle research instrument, because the interviewer becomes the research instrument.

While good qualitative methodology makes for good oral history, effective triangulation with rigorous quantitative methodologies promises even better oral history. For this study, in addition to developing a strong historical, linguistic, and folkloric knowledge of the area, interviewers were prepared with data extracted from a fifty-year demographic profile compiled from census data, economic development studies,
Atomic Energy Commission hearings, acequia reports, the records of mutual aid societies, parish records, and other sources of empirical information.

Before interviewers went into the field to take oral histories of people’s memories and experiences, we had the empirical basis of what constituted their daily lives over the last half-century. By documenting and graphing various social indicators—income, ethnic distribution, educational achievement, infant mortality, available health and medical services, seasonal unemployment, substance abuse, and domestic violence—the interviewers had an “objective” composite profile of a village or town before arriving to take subjective testimony of change or continuity over time. As a baseline we used the data gathered from northern New Mexico villages published in the 1938 Tewa Basin Study. From there we followed our indicators on a decennial basis and constructed a question set that, in broad terms, covered family history, Los Alamos employment histories, and cultural adjustments made to achieve employment success.

The original idea was to recruit and train interviewers from residents of the communities we were about to study. To this end, we designed and advertised a one-semester training course at the Los Alamos campus of the University of New Mexico. For two consecutive semesters our efforts to recruit students failed. Most students at UNM Los Alamos take undergraduate or graduate courses in technical subjects. Although there was a burgeoning Southwest Studies Program at the time, there was either not enough interest in the study or many locals saw the study as controversial and potentially compromising. Since LANL is the largest employer in the area and pays salaries often three to five times what other local employers pay, there is a premium in getting and keeping a job at the Lab. Interviewers from UNM’s main campus in Albuquerque or those on contract, then faced the next challenge: how to build a representative sample of fifty to seventy-five interviews that would yield an accurate picture of the impact Los Alamos has had on northern New Mexico.

"Impact Los Alamos" used early morning radio to introduce the project to long-time residents and former Los Alamos employees. Regional newspapers and Arellano, a quarterly magazine, published stories on the project. In the Española Valley, project members gave presentations before senior citizen groups composed primarily of former employees or residents of Los Alamos. As soon as the newspapers articles appeared, our office received calls from people either wanting to be interviewed or suggesting people to contact.

Interviewees and their respective experiences varied. Some had their standards of living changed dramatically by the high wages they earned in a region plagued by chronic unemployment. There were those who had family lives destroyed by substance abuse. Others suffered cata-
strophic diseases caused by accidental exposure to toxic materials or radiation. Still others had relatives killed in tragic work accidents at the Labs. Some credited the survival of their traditional way of life to employment at LANL, and some attributed the deterioration of their traditions to the ethic of individualism, profit, and secular advancement. While some saw Los Alamos as the salvation of northern New Mexico and the glorification of their homeland, others condemned “conehead culture” for ending a serene and peaceful way of life. The differences in attitudes and work experiences was broad, but they represented a population that had labored in Los Alamos.

Women and Native Americans continue to be weakly represented in the study. This deficiency exists in part because northern New Mexican women represent a minority of Los Alamos employees. Women, however, were able to tell us how Los Alamos affected family and community life. Whenever possible we included wives, mothers, and female relatives of the men we interviewed. We were fortunate in the responses we received. Unfortunately, local Pueblo Indians were extremely reticent to be interviewed. In recent years, the Department of Energy and other government agencies conducted numerous interview projects among the pueblos. Perhaps, the Pueblos identified our work with those efforts. Whatever the case, since the public forums occurred several Indian pueblos have requested interviewers.

Another problem arose that extended the time we needed to conduct the research. Several times during our fieldwork, newspapers published dramatic revelations about surreptitious testing on Lab employees and others. Often, the press covered controversies and debates about inordinate cancer rates in Los Alamos. During the course of this study a controversial rash of RIF (reductions in force) lay-offs took place that local Hispanics challenged as racially and ethnically biased. This controversy ultimately led to a much publicized and protracted legal battle.

At each juncture, we found that interviewees tended to dwell on these topics rather than thinking about the past due to their overriding concern for the future. When the press featured stories on layoffs and radiation experiments, we stopped interviewing until coverage subsided. We wanted people to concentrate on memories of the past and not to telescope current problems into historical memories. Nevertheless, layoffs, racial discrimination, and unsafe working conditions all emerged as topics of discussion in the interviews.

One man suing LANL for wrongful dismissal was convinced the Lab had been taken over by a Mormon minority which excluded most non-Mormons from the highest echelons at Los Alamos. This perception of a Mormon domination of the labs often came up, both in interviews and the public forums. Some interviewees suffered from rare cancers they attributed to their work with hazardous materials at the Lab. Hispanics and Native Americans often told of not being allowed to eat in the same
lunchrooms with whites and being referred to as “aborigines.” A veteran of WWII recalled his treatment by the administration and co-workers at the Lab as “... worse than anything the enemy dished out in the Pacific.” By recording all of these stories we have incorporated them into New Mexico’s historical legacy, and all will validate the fecundity of oral history.

Good interviewers assured the success of this project. An ideal candidate would be well-trained, highly experienced, familiar with the region, and able to develop rapport and trust with interviewees. Due to security rules, LANL employees may not discuss their jobs candidly, much less critically. Additionally, Hispanic and Native American communities have, over the years, been the victims of exploitative journalists and anthropologists who have written stories and conducted studies without as much as a “thank you” letter or complementary copies of their works. People in northern New Mexico are increasingly suspicious of anyone wanting to tape-record or photograph them. Some people wanted to be paid for their interviews. We do not pay interviewees and we will not pay interviewees. Thus, rapport, confidence, and trust were crucial to our work.

In addition to student and staff interviewers, we were able to recruit local scholars familiar to many interviewees. In cases where we used local interviewers, we allowed them to deviate from the question set to explore topics or questions particular to their respective interviewee or locale, thereby yielding richer details on family and personal histories. Occasionally, this produced material not anticipated by our question set design, such as the Mormon issue mentioned above. In addition to audio recordings, we videotaped some of the interviews, personal photographic collections, and other material culture. At times we shot black-and-white portraits and landscape photographs, some of which appear in the “Views from the Hill and Valley” photoessay in this issue.

Oral history is exciting and challenging in part because it rarely remains in the domain of the professional historian. Because it originates from the so-called “inarticulate masses,” it often comes in bits and pieces—raw, unrehearsed, and unworked. When released for public uses, it often receives strong unsolicited criticism. It also provokes popular memory, encouraging others to share their memories with researchers. At times oral history is chaotic, but it can prove a challenging and useful exercise to researchers delving into difficult and divisive issues.

Taking oral history back to the community from which it was gathered gives that community an opportunity to expand, challenge, or confirm what previous interviewees have said. More often it gives communities a forum to bridge the chasms between races, classes,
ethnicities, or the social space created by hierarchical or secretive institutions. For these reasons we organized the series of forums “Symposia for the Community” in spring of 1996.

We chose venues likely to draw audiences most affected by the work of Los Alamos and where interest had been demonstrated in the UNM Oral History Program. These included the Bradbury Science Museum in Los Alamos, the Oñate Visitors and Cultural Center in Alcalde, the Alamogordo Space Center, and the Continuing Education Center of the University of New Mexico in Albuquerque. Contrary to our usual procedures, the Oral History Program did little to publicize the symposia or attract media attention, thereby allowing each symposium to draw a local audience. We sought to encourage audiences to raise criticisms, objections, or insights to the presenters, free of intimidation or discomfort. Our intention was not necessarily to provoke local debate but to offer a venue for reaction to our presentations and suggestions of areas for further research.

We provided forums where people, separated by social distance although interacting daily, would find it easier to communicate with each other. Indeed, reading the audience reactions from the Bradbury Museum and the Oñate Center symposia, it is hard to imagine greater social distance between people who work in such close proximity. At Alamogordo and Albuquerque, we wanted scientific researchers and entrepreneurs to consider the impact their work had on the surrounding region.

We solicited critiques of our study by sharing our findings with audiences. To that end we invited several scholars to deliver brief talks presenting their discipline’s perspective on events of the past half-century. Each of the scholars prepared their presentations independently and without consulting our interviews. In fact, those making presentations at the Bradbury Science Museum met each other for the first time that evening.

We sought historians, economists, linguists, and activists who would address the ethical and philosophical dilemmas scientists and engineers faced in their work on the development and construction of the world’s most destructive weapons. We recruited leading scholars familiar with and dedicated to the study of New Mexico. Melissa Vigil, a doctoral student in the UNM Department of Economics, compiled an overview of economic activity in northern New Mexico, primarily culled from census data. She presented her findings as an overhead slide presentation. Due to other academic commitments, she was unable to prepare her talk for publication in this issue.

Robert Torrez, New Mexico State Historian, mined the riches of the state’s archives and reported Los Alamos’ place in the history of northern New Mexico and the state. Professor Ferenc Szasz, a scholar of New Mexico and the author of highly respected works on the birth of the
atomic age, offered his insights on the changes science and technology wrought on the state. Estevan Arellano, poet, scholar, and advocate for traditional agriculture, gave a historical perspective of Los Alamos’ influence on the local economy and land. Professor E.A. “Tony” Mares, scholar of science and prolific writer on northern New Mexico, discussed the leading cultural dilemmas and challenges that science poses in a region replete with traditional cultures. Professor Jon Hunner, a young scholar working on a social history of Los Alamos offered a glimpse into family life. Their presentations follow this introduction.

Each presentation evoked provocative audience responses and suggestions. At each presentation, speakers and audience were both video- and audio-recorded. Selected audience commentaries are printed in the Audience Responses section of this issue. The thirteen hours of videotape are being edited into an hour-long program for future broadcast on educational television.

The UNM Oral History Program seeks to get the most out of oral history. In addition to assembling an archive of over 100 hours of audio and video recordings, we have collected memorabilia from interviewees, pre-interview research materials, and a collection of photographs. Among the most important gains of this project has been the training of university students and community-based volunteers in oral history research and processing.

What is the value of this study? “Impact Los Alamos” could become a prototype for any number of projects. This model posed important questions about one scientific institution’s effects on its region. A similar study of Santa Clara County, California, concerning Silicon Valley is a case in point. Closer to home, a study on the Waste Isolation Pilot Plant near Carlsbad Caverns could assess the local economic, social, and cultural effects. Additional studies could answer more questions. Has Albuquerque benefitted from its economic dependency on Sandia National Laboratories and the adjoining military bases? Will the billion-dollar expansion of INTEL’s operations in Rio Rancho, New Mexico, make that burgeoning “City of Vision” the arcadian dream promised by developers? Is Houston, Texas the richer for NASA’s space complex that pumps millions into its economy? Do these grandiose projects distort the local economy, disrupt community integrity, and dilute local cultures? Are these necessarily bad?

As we enter the twenty-first century, oral historians can help community planners by documenting the views of those most affected by the decisions of government and business—decisions that will shape all our lives. In a small way, and in a relatively remote part of the country, the UNM Oral History Program has contributed to this effort with its “Impact Los Alamos” project.
ACKNOWLEDGEMENTS

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At each of the symposium venues, we received unqualified support. At the Bradbury Science Museum, John Rhoades and his staff helped overcome skepticism about our work and convened the largest and most vocal audience. At the Oñate Center, Estevan Arellano and Paula Valdez prepared their beautiful facility to serve Los Alamos' affected neighbors. Although small, the audience made some of the most compelling statements that evening. At the Alamogordo Space Center, the efforts and contributions to the discussion by George House and director Don Starkey more than compensated for the small audience. At UNM, Dean Jeronimo Dominguez and Assistant Dean Eduardo Rodriguez accommodated the large weekend audience. The greatest thanks, however, goes to our interviewers and interviewees. Their "dual authority" helped capture the nature of the discourse between science, technology, and traditional culture between 1943 and 1995.12

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NOTES


4. Among time-series data we consulted were: the 1950, 1960, 1970, 1980, and 1990 United States Census; Selected Health Statistics of New Mexico, 1975, 1979, 1985, and the 1990 New Mexico Selected Health Statistics Annual Report. Other data were taken from national, state, and local government information sources. In 1994, the LANL Stakeholder Involvement Office issued an information sheet "The Laboratory and Northern New Mexico." According to this report, LANL employed 11,000 people, 6,000 of whom resided in Los Alamos County, while 2,200 and 2,000 lived in Rio Arriba and Santa Fe Counties respectively. The Lab claimed a statewide employment effect of 36,000 jobs, or 5.4 percent of the state’s total employment, and an economic impact of $3.7 billion, or 6 percent of the state’s total economy. According to this study, Los Alamos County had the highest educational level in the United States; 48 percent of all adults held college degrees and one in fifteen residents of the county possessed a Ph.D. The county had the highest per capita income in the nation and an unemployment rate of 1.4 percent, while Rio Arriba County’s unemployment rate fluctuated between 15 and 20 percent.

5. The Tewa Basin Study has received the attention of a prominent UNM scholar who edited the study and published the section covering demographic data gathered on northern New Mexico villages in 1935. See Marta Weigle, ed., Hispanic Villages of Northern New Mexico: A reprint of Volume II of The 1935 Tewa Basin Study, with Supplementary Materials (Santa Fe, New Mexico: The Lightning Tree, 1975). Another source that provides a base line demographic sketch of northern New Mexico before the establishment of LANL is Suzanne Forrest, The Preservation of the Village: New Mexico’s Hispanics and the New Deal (Albuquerque: University of New Mexico Press, 1989).

6. The radio stations that promoted the project were KRSN (Los Alamos), KSWV (Santa Fe), and KDCE (Española). We gave interviews on KUNM, UNM’s public broadcasting station that reaches most of the state via local translators, and KXKS (Albuquerque).


8. Department of Energy Secretary Hazel O’Leary released heretofore classified information about radiation experiments conducted during the 1940s and 1950s, in some instances, upon and without the express consent or knowledge of Lab employees and others. The same type of experimentation occurred at other nuclear facilities and may have been widespread. These disclosures had significant impact on people interviewed for this project.

9. Over the years there have been debates over whether an inordinate number of brain cancers exist in Los Alamos. Epidemiology studies have thus far been inconclusive. “Study Can’t Explain Los Alamos Cancers,” Albuquerque Journal, 21
February 1996, p. 1. When the subject of Los Alamos cancers surfaced, it became the main topic of conversation for longtime residents of Los Alamos. Some were very philosophical about these studies arguing "You have to die of something."

10. In November 1995, over 100 workers were laid off as part of a Reduction in Force (RIF) campaign, supposedly to forestall future budget crises. All documentation of criteria used to decide who would be laid off, who would receive large severance packages, or who would receive extended health benefits, was shredded and never made available to investigators. In 1996, LANL had a budget surplus of over $60 million. Some local employees argued that this amount was five times what it would have cost to keep the laid off workers employed. In other words, interviewees argued the layoffs were not "budget driven."

11. The lawsuit alleging that discriminatory and arbitrary criteria and methods were used to lay off workers in 1995 stemmed from a Federal Contract Compliance Program of the United States Department of Labor investigation and resulted in the class action complaint entitled Aragon, et al. v. University of California, et al. LANL won a change of venue from the First Judicial District comprised of Santa Fe, Los Alamos, and Rio Arriba Counties, when Judge Jim Hall ruled the Labs could not get a fair trial. A local newspaper, the (Santa Fe) New Mexican, published several stories on the case. "O'Leary says LANL Should Not Fight Labor Finding of Discrimination," New Mexican, 23 October 1996; "Lab Wins Change of Venue in Lawsuit," New Mexican, 24 October 1996; "Witness-tampering Charged in Lab Discrimination Suit," New Mexican, 22 October 1996. The paper's editorial page of 21 October 1996 included "LANL Need Not Go to the Mat on Layoff Ruling," and a letter under the headline "LANL Fighting with Everyone" from Chuck Montano of Citizens for LANL Employee Rights (CLER) that argued that LANL was striking out at anyone critical of its policies.