

WALK WITH ME

A Life Memory



By
HARRY BRILEY

Chapter 4 – College with Purpose

Revised 12/5/2020

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Published By
BRILEY SOFTWARE
PO Box 2913
Livermore, CA 94551-2913

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Chapter 4A - College with Purpose

Socorro, New Mexico

1971-1976

New Mexico is high desert with the largest city Albuquerque quartered by Interstate-40 and Interstate-25. South along the dry Rio Grande are the towns of Isleta, Belen, and Socorro. Socorro is center of the state at 4620 feet elevation. In 1971, including the college, it had a population of 6750. Continental Trailways provided bus service.

Free State of Socorro

Socorro (meaning “Help”) was a stopover between El Paso and Albuquerque. When the United States annexed the territory, Mexican paperwork left the county unaccounted. There was great pleasure, with no tax benefits, in calling it the ‘Free State of Socorro’.

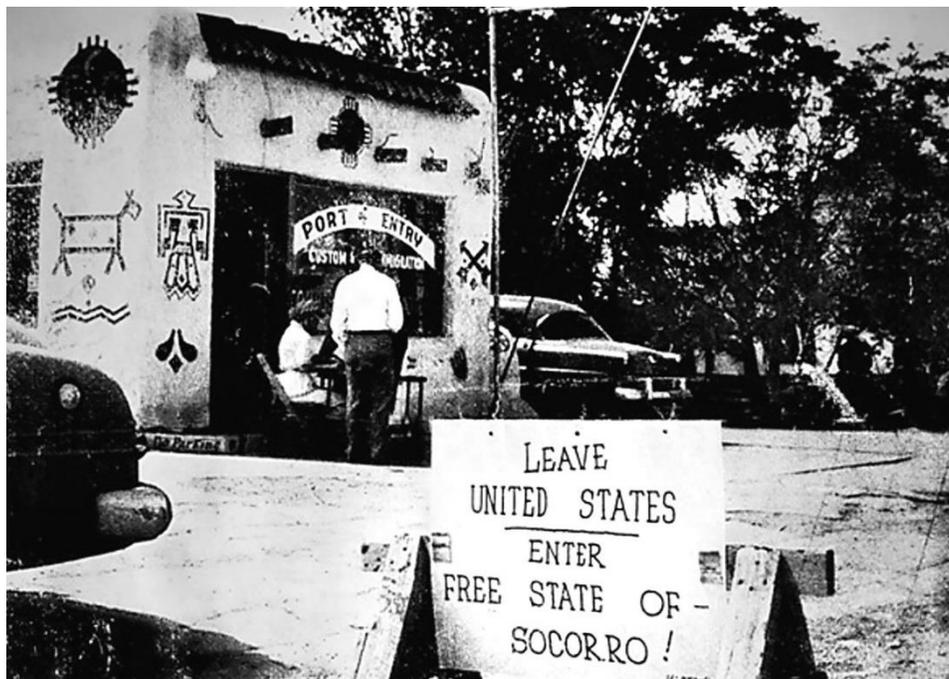


Figure 1 - Free State of Socorro (LIFE Magazine 6/8/1953 pg.53)

“Secession of Socorro”, LIFE Magazine 6/8/1953, page 53 (edited)

A New Mexico county claims it is not part of the U.S. Local courts make their own laws. They acquitted a county treasurer of making off with public funds. His lawyer pointed out the bonding company made good on the theft and anyway the treasurer was spending the money in the county. A few citizens, digging into old laws to straighten them out, found something to give the county a new chance.

Socorro escaped all legal transfers to [New Mexico]. They launched a movement for formal secession that quickly became a publicity stunt. Socorro has a port of entry and a border patrolman. As for the Arizona part of the grant, a citizen said, "We do not want Arizona. Half of it blows over here every spring anyway."

Paul Harden of the Socorro County Historical Society differed in the origin, having written a local weekly history column as follows.

El Defensor Chieftain, 10/17/2013 (edited)

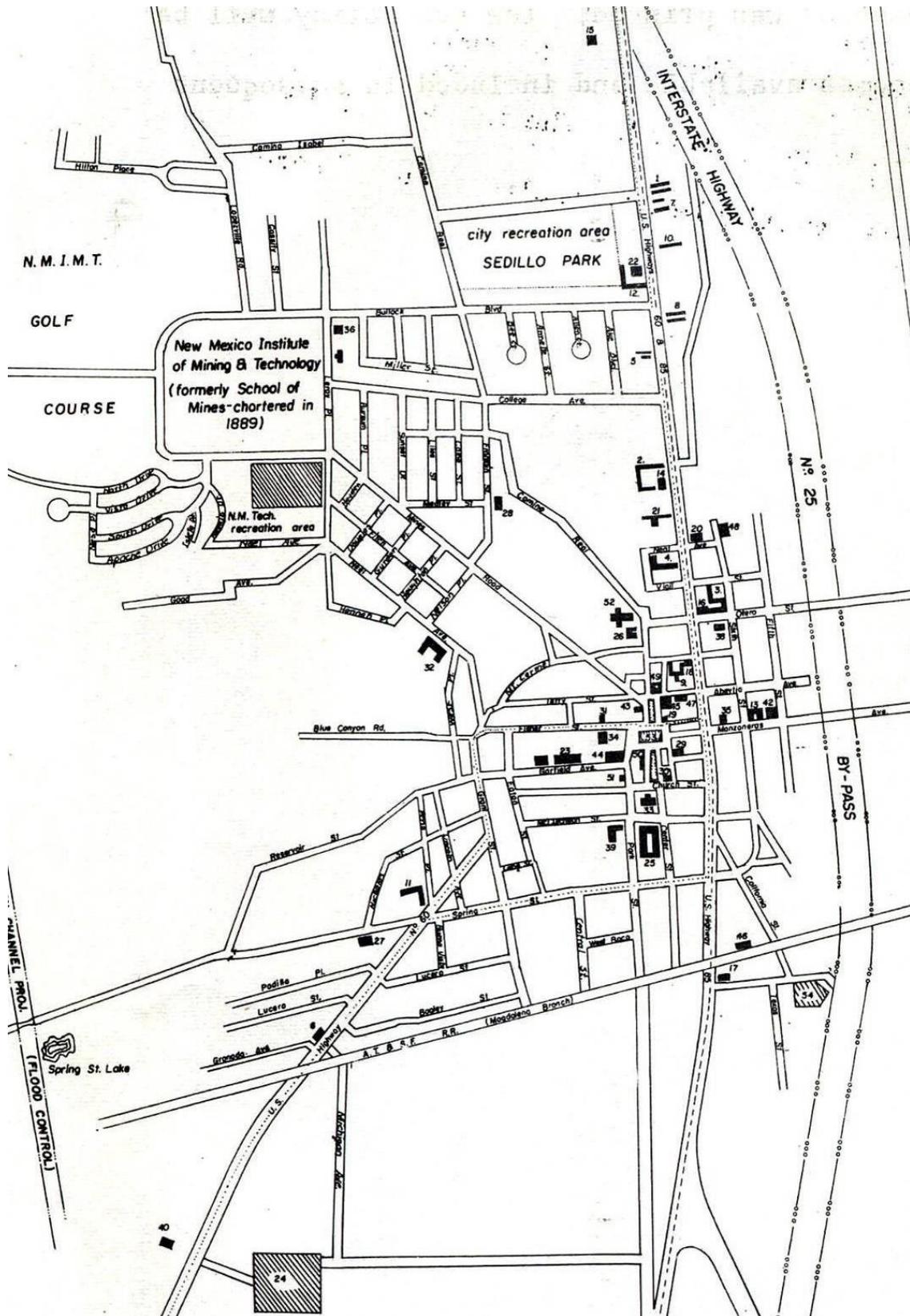
It started in 2/1953, when the court found Socorro resident Elmer Brasher guilty of driving while intoxicated. Brasher hired local attorney Claron Waggoner to appeal. Waggoner argued that while DWI was against state law, he could find no such law in Socorro's ordinances. District Judge Charles Fowler, intrigued by this argument, suspended court to conduct his own investigation.

*Waggoner likewise investigated Socorro's legal history. When the Spanish empire fell in 1821, Spanish lands became Mexican land grants. With 1912 statehood, those land grants became part of New Mexico. The Spanish **Provincia de Socorro** land grant was never turned over to Mexico, omitted from the 1848 annexation to New Mexico territory, and still overlooked in 1912. Therefore, attorneys concluded Socorro County never was a legal part of New Mexico.*

Socorro Chieftain editor Thomas Dabney announced these findings and speculated citizens were due a full refund of federal and state taxes since 1912. He published the official "Proclamation for the Free Republic of Socorro," in English and Spanish on April 9. Socorro erected a Port of Entry on U.S. 85 (now I-25) and charged 25 cents to pass. For \$1, you could become a citizen and travel all county highways free. Almost overnight, with the LIFE article in June, Socorro became a tourist destination. Thousands of travelers bypassed Santa Fe for Socorro. The heyday lasted into 1955, but revivals keep the movement alive.



Map 1 - "Free State of Socorro Chronicle" (Facebook Group, 2019)
Based upon the Juan Miera Land Grant documents of 1880.



Map 2 - Socorro, New Mexico – 1971

A REVIEW OF TECH (edited extracts)

The Silver Bar, New Mexico Tech, [Spring] 1975, Volume 1, page 15 and 26

By Umar Ahmad [using material from Richard Matthaei]

[Richard recounted his experience 1937-1941 to his recent tour in 1973.]

Development is slow in Socorro. The town is more or less the same as the early 20th century. Old buildings like its hotel Val Verde are dying out. Gone are old-time casinos, miners with gold pans, and gunfights. It has become "civilized".

"The death of President Wells and imprisonment of the Bursar were difficult time for the school in 1938. Students attended the trial at odd times. Justice in a bi-lingual courtroom was sometimes difficult to understand.

"One of the most interesting trials was for murder with the famous Elfego Baca as Defense Attorney. In his earlier days when New Mexico was still a territory, he was a real terror. As a Defense Attorney, he was something else.

"[Four of us students] lived in the Torreon in our senior year. The Torreon is caty-comer from the high school—but now pretty much run down.

"The Socorro Chieftain [newspaper] was published weekly on a site now occupied by the State Bank of Socorro. They published the Gold Pan every two weeks when we pushed hard. More often than not, it was regularly irregular.

"The Hilton Drug Store, Munday's Drug Store and Capital Bar are in the same locations. Willie Garza served a good scotch and soda for two bits and beer was still a dime. On the [original town] Plaza where now stands the Safeway Store was the Park Hotel and Cafe, and the Park Theatre along with the Bus Station.

"Mrs. Petty's place was a favorite student hangout between classes. She had her place where a portion of the Flower Shop now doing business was the site of the old Post Office. The [Post Office] too was a favored place at months end.

California Avenue (the main street) has most changes. The Coronado Bar was next to the Fair Store and Brannie Abeyta's "Bloody Bucket" across the street handled a good supply of "medicinals" at a low price.

[By 1973,] Jerry's Restaurant opened across from the Vagabond Motel on the north end. It is a hangout for students since open 24 hours. Behind Circle-K, Tastee Freeze opened its drive-in. On the other side of Circle-K, a new plaza houses Kentucky Fried Chicken, a fabric shop, and a men's clothing store.

Further [south] on California, Lot-a-Burger opened. An Olympic size pool opened in Sedillo Park. All this development [occurred 1971-1973]. Another big plaza will be built in 1975-1976 for a theater and shopping complex.

Passenger Trains ... in Socorro?

The railroad carried freight through town but no longer offered passenger service in 1971. Yet, indeed, there was once passenger traffic to Socorro.

El Defensor Chieftain, 7/2/2010 (edited):

A rare group of Tech students, no more than 10 that year, arrived in Socorro in 9/1963, not by bus but over the rails of the Santa Fe's Rio Grande Division in the self-contained diesel [gasoline?] passenger consist called the Doodlebug. Upperclassman Leroy Eide met our entourage at the depot.

Michael Lipsie an older Computer Science student drove the college station wagon to the Socorro depot to meet the “train” for incoming students through 4/1968. Although Amtrak began in 5/1971, I arrived on the Santa Fe ‘El Capitan’ to Albuquerque still wearing its “war bonnet” red and yellow colors in June. My 1:10 pm arrival did not have connections to Socorro. A nighttime bus took us stranded students south to Socorro.

Dr. Richard Melzer, vice president of the Valencia County Historical Society wrote the article “**A-I-I-I-llll aboard!**” on 5/20/2004 (reduced and edited):

John McCall [wrote] the best book on Doodlebugs. A 1948 editorial in the News-Bulletin by Carter Waid [asserted that] passenger train names helped create their personalities [such as the] famous Santa Fe trains as the El Capitan, The Chief and, of course, the Super Chief. However, it was [especially] true of a local train.

No other train in Valencia County was more dependable, useful, appreciated and admired than a small motorcar known as the Doodlebug. The all-steel train was a local and like a 70 feet bus on tracks. It carried 44 passengers and the mail. Sometimes, a second car was attached for more travelers and light cargo.

The Doodlebug and its crew are remembered fondly. The car was always clean, with a distinctively clean smell inside. A friendly conductor helped people board. The helpful crew was kind. This favorite train went as far [south] as Socorro and employed Anglo conductors unsure how to pronounce it, saying, “S-a-a-c-a-row”

A roundtrip cost less than a dollar and saved on gas, especially during World War II rationing. Railroad families with free passes were frequent passengers. There were 48 [active] Doodlebugs from the early 1930s to the mid-1950s.

Operating the larger El Pasoan RDCs, daily from El Paso to Albuquerque, with stops in Belen and Los Lunas, cost \$146K in 1967 while revenue fell to \$61K. Unable to compete [against cars and buses], the Santa Fe shut down passenger service in Valencia County. The last Doodlebug stopped in Clovis in early 1967 and the last passenger train left Belen on 4/9/1968.

The [Belen?] Doodlebug was placed in storage and waits for remodeling so that it can be placed on display at the Sacramento Railroad Museum in California.



Figure 2 - Santa Fe Non-passenger Doodlebug M160 (M.Bernard)

This Santa Fe Doodlebug #M160 has sat in Clovis since 1/11/1967.
Preserved at the Museum of the American Railroad

“Doodlebugs, The Popular Motorized Rail Car” (reduced and edited):

Doodlebugs have a small size and quaint nature (serving bucolic towns and communities). Most were powered with gasoline engines and not diesels. This let railroads [serve] light branch and secondary lines that saw little traffic.

Do not confuse it with the [larger] Rail Diesel Car (RDC). They were quite different from interurban railcars and streetcars powered by [overhead] electricity. It had a boxy appearance and flat cab face with a hood headlight.

The first cars used a retrofitted automobile engine, featuring the common design for freight/mail [in front] and rear coach seating. The Chicago, Rock Island, & Pacific in 1927 took traction motors and the power plant from one car and added it in another. This featured traction motors on all four axles with two engines.

The Transportation Act of 1958 decreased how States could regulate passenger services over secondary lines. The routes either ended passenger operations or were outright abandoned thus dispelling the need for the car. Most [Doodlebugs] were gone by 1960. The term Doodlebug is derived perhaps by the way the car meandered or "doodled" through small towns and across the countryside.

*See: **Doodlebug Country: The Rail Motorcar on the Class 1 Railroads of the United States** by Edmund Keilty. - www.american-rails.com/doodlebugs.html*

I could not determine if the larger El Pasoan RDC trains stopped in Socorro as they sped through. They stopped in nearby Belen and Los Lunas before reaching Albuquerque.

The Santa Fe purchased only two RDCs (Model 1, 90 passengers). The Budd Rail Diesel Car (RDC) was a self-propelled diesel railcar built from 1949–1962. The cars were adapted from a standard 85-foot coach for rural traffic. They were less expensive to operate than a traditional diesel locomotive with coaches. The cars ran singly or coupled. -en.wikipedia.org/wiki/Budd_Rail_Diesel_Car



Figure 3 – Two Budd RDC-1 cars – Vancouver Island (A.McLellan 2009)

These were Santa Fe streamliner #13 [northbound?] and #14 [southbound?] in the middle 1960's. The late 1950's saw the switch over to the Rail Diesel Cars (RDC). After [passenger] trains' discontinuance in 4/1968, these [two] RDC's were orphaned and returned to Topeka. - www.trainorders.com/discussion

An iconic 1971 photo of the Socorro Depot portrayed the sense of a desolate rural area. The ubiquitous pick-up trucks of the Southwest crowd the photo. It showed signage for the Santa Fe (prior to the Burlington Northern merger). A 1970 or 1971 Plymouth Duster (not mine, with the horizontal slit taillights for those two model years) sits parked in front. Driving a pickup truck onto the rails seems a prank as the truck does not have rail adaptors. A ten-speed bicycle as commonly used by students stands in the foreground.



Figure 4 - Socorro Depot (from C.Errington c.1971)

The College

New Mexico Institute of Mining and Technology (New Mexico Tech, NMIMT, NMT, or simply ‘Tech’) lies due west of town. It includes a golf course and ‘M’ Mountain further west. The ‘M’ stands for “School of Mines”, the college’s original name.

Kathy Hedges once wrote for the college web site (summarized):

*In 1889, Socorro was a mining boomtown, wild, raucous, and at a population of about 4500, **one of the largest towns** in New Mexico. The Territorial Legislature founded a **School of Mines** to train mining engineers. Silver and lead ores from the Magdalena Mountains came to the smelter of German immigrant Gustav Billings. The new school let students train near their eventual work and opened 9/5/1893, with one building, two professors, and **seven students**.*

*During 1930s, graduating students numbered only in dozens. Petroleum engineering quickly outpaced mining engineering. With WWII, the school arranged for an Army Specialized Training Program (ASTP) for the military. The ASTP supplied most WWII students. The focus thus turned to physics and math. After the war, enrollment jumped in 1947 to **213 students**.*

*Dr. Workman then recruited a more diverse faculty with a strong research bent. In 1951, he altered the college name to **New Mexico Institute of Mining and Technology**. A graduate program produced the first Ph.D. in 1956. Enrollment remained steady at 200 students, most in petroleum engineering.*

*After 1965, enrollment jumped to **800 students**. A computer science department founded in 1965 was one of the first in the country. During the early 1970’s, astrophysics joined atmospheric physics as a major interest, especially after the National Radio Astronomy Observatory built its Very Large Array in Magdalena, 60 miles west of town. By the late 1970’s, enrollment doubled to **1500 students**.*

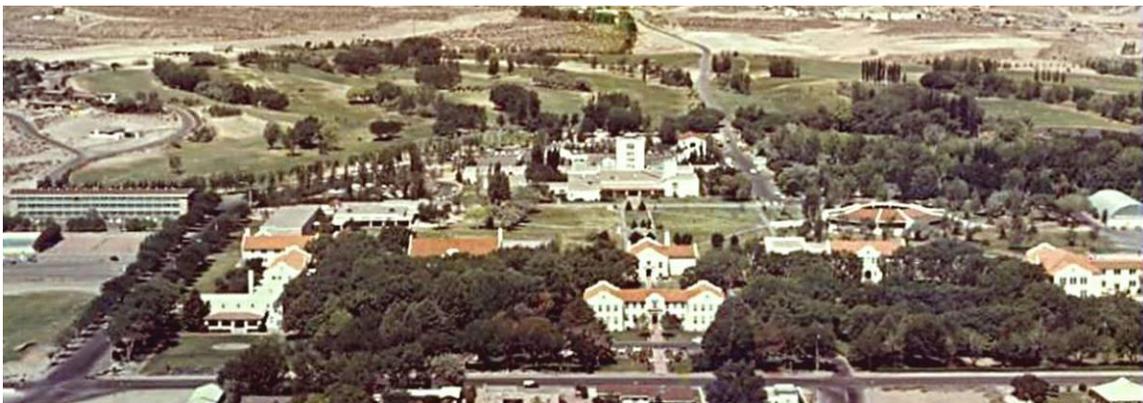
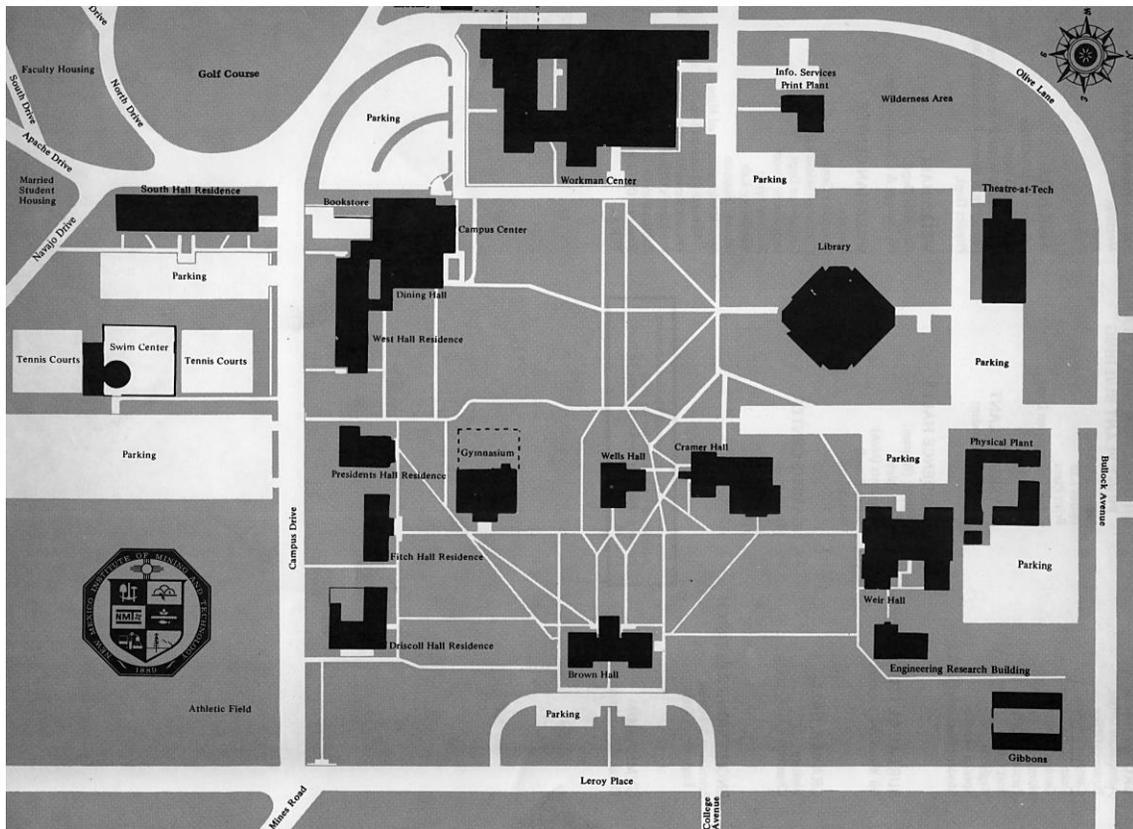


Figure 5 - Campus in Summer (T.Oliver/R.Gray/T.Dillion 1971)

Leroy Place fronted the campus. The diagonal School of Mines Road (on the southeast corner of the original campus) terminated a mile away at the downtown Socorro Plaza.



Figure 6 - Campus in Spring (NMIMT 1974)



Map 3 – Campus Layout (NMIMT 1973)

Campus Buildings

Brown Hall was the hub of the campus named in honor of a founding professor. The WPA during the 1930's Depression built this and several other campus buildings with red Mexican tile roof and beige stucco (but repainted bright white in the 1970's).

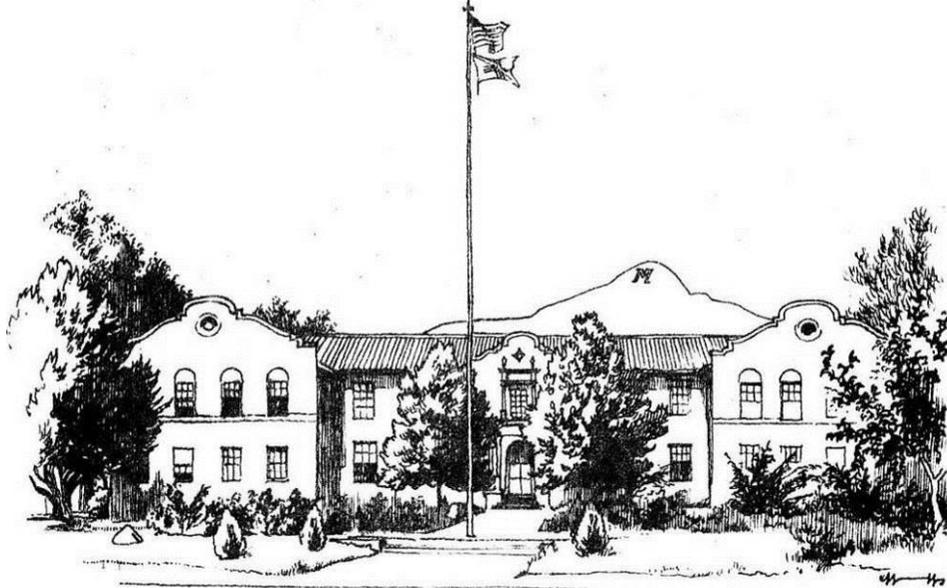


Figure 7 - Brown Hall - Administration - 1972

The Mustard Seed Coffeehouse (MSCH) set up shop in the western backside basement of Brown Hall. My senior year software office with the Business Office and the campus Post Office were both in north end of the basement.

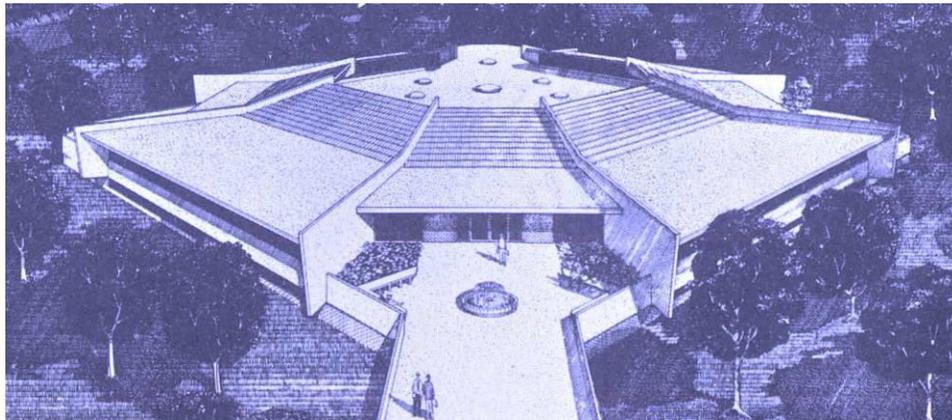


Figure 8 – Speare Library ("It's a Starship!") - 1970

The newly built two-story Speare library had a circular interior core with four side pods. In its first year (only), we had 24-hour access using our ID cards and a passcode. The half-submerged basement hosted an audio room with a high-end stereo, headphones, and turntable. The late night quiet was conducive for completing my homework. Abuse of the system forced the library to daytime hours only. That was a significant loss!



Figure 9 - Workman Computer Center and Bureau of Mines (NMIMT 1975)
Kimberly (d.2019) and Earl Eiland descend the steps.

A REVIEW OF TECH (edited extracts)

The Silver Bar, New Mexico Tech, [Spring] 1975, Volume 1, page 15 and 26

By Umar Ahmad [using material from Richard Matthaei]

Few of us will graduate from here, but Tech will stay in our memories for a long time. We the graduating class [of 1975], want to see it grow and improve.

We [interviewed] Richard Matthaei. He graduated from New Mexico School of Mines in 1941 in Metallurgical Engineering. The 'Porphyry' yearbook of 1941 lists him in Cooney Mining Club, Gold Pan [newspaper] Staff, vice president of student body, and basketball and baseball teams. He received his MS in Mining Engineering from Missouri School of Mines in 1952, and was an engineer in gold mines. He returned in 1973 for his PhD but a company made a [better] offer.

"[In my 1937] freshman year, we had the largest enrollment of about 125, including a lone gal. Total enrollment was 200 [and settled down to 125]. At graduation [in 6/1941], the Senior Class was [only] 26 (still the largest).

"Paved roads were the two main highways thru town and Mines Road with only a few houses. Gunter's Dairy occupied a large area north of Mines Road. All other roads went were graveled or trails of two ruts. The [college sole] entrance was over a cattle guard with the NMSM plaque affixed to a brick post on each side.

"All buildings were beige stucco with red tile roofs. Not too much vegetation. Parking was alongside Brown Hall across from the gym. The Geology Prof., Doc Talmage, warned [us how to park to] avoid sand blasted windshields.

"The farthest west buildings were the gym (and [former] pool), petroleum and chemical buildings. There was no salvage yard. Workman Hall replaced the old baseball diamond. Just north of that baseball field (hardball) was a sand trap

with touch football (6 man) and a softball field. The tennis court was across the road from the Chem. Lab. Our fair basketball team played the Aggies and UNM among others. The golf course was non-existent.

"No graduate, professional, or [South Hall] housing existed. The Tin House (where the basketball player's lived) stood where the Nursery Bldg. now stands. The Work Progress Administration (WPA) tore it down before it fell down.

The three [remaining real] dormitories: Driscoll, Fitch and Presidents [had a] dining room in the basement of Fitch for residents. Occasionally, "Hap" the cook gave some Townees a handout when they looked real "hungry".

During the WPA, local residents were building a stone sidewalk between [those dorms]. During the day, some progress [occurred]. During the evening, the stones were removed and staked lines relocated. After several weeks, higher authority intervened. The [students only wanted] the men steadily employed. Presidents, West, and Driscoll (girls) Halls [prior to 1970 were] "renovated".

"Brown Hall combined Administration and Lecture Halls [on the first floor], with the Library in one end of the basement. The Metallographic Lab and Bureau of Mines occupied the remainder of the [basement]. Geology Labs were on the second floor. The senior class each year gave a gift to the school and ours was the water fountain on the first floor in Brown Hall. As the poem (Gold Pan, 4/28/1941) says it never worked properly at least while we were still there.

The Library [recently] moved from Wells Hall to the new [Speare Library], located between Workman Center, Weir Hall, and the theater. The audio/visual aids and books, many obtained from a bond issue, reflect [much] improvement. However, the [1971] open-door policy was changed to limit the theft of books.

Northeast of Weir Hall, the building that was a day-care center (and everything else; apartments, clubs center, store house, etc.) has just been converted into VLA (Very Large Array) offices—a giant telescope being built near Magdalena. North of Weir Hall, Physical Plant built its own offices and workshops.

"Weir Hall had just been completed and named for Prof. Weir (Civil Eng.) who taught many years and suddenly passed away. The Assay Lab was completed later with a dirt floor in the basement. Mining rescue was taught there.

[Since 1969], metallurgy in Weir Hall expanded with little room to breathe. Plant is [now] installing an elevator. The physics lab, once on the first floor moved to the biology lab, which in turn moved to the basement of Cramer (science) Hall. The room vacated by Physics houses an electron microscope, an ion-plating lab, and a lab for extractive metallurgy. The chemical metallurgy lab in the basement became a furnace room. The X-ray lab moved up to the second floor [to make room for] four field-ion microscopes."

Living Quarters

Dormitory

All freshmen lived in the dormitories and ate in the school cafeteria. I lived in South Hall facing picturesque 'M' Mountain for one year. The crystal blue New Mexico skies caught my attention after two years of smoggy Los Angeles skies. One glorious red sunset framing the mountain called for a photo from the roof of that three-story building.



Figure 10 - 'M' Mountain Sunset (B.Stevenson)

The cafeteria food added 25 pounds to my scrawny 155-pound frame that first summer. Older students sought cheaper off-campus apartments, rode bicycles, and cooked for themselves, thus protecting every precious dollar.

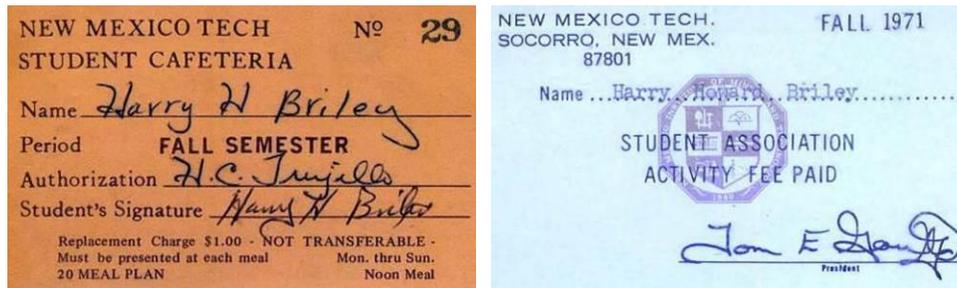


Figure 11 - Freshman Semester - 1971

Bill Hembree, my older summer roommate was a questionable morals zone. He took to educate me with Playboy centerfolds on all walls. Fortunately his even older friend, Robert Heid, co-preached with me (discussed later) at Socorro Christian Church. Robert made the logical request that Bill move his posters to his half of the room. Bill agreed and then further wallpapered his half more fully with centerfolds. I found a new second-floor roommate in Gary Schmierer for that fall quarter.

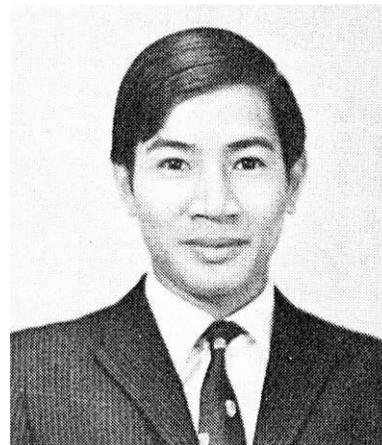
Bill was not altogether bad. He just had a chip on his shoulder if anyone questioned his affinity to soft-core porn. Though not ever a friend, he came with the territory and did sophomoric hijinks for the rest of us.

Robert, Bill, and observers (one other and I) rigged a water balloon slingshot secured to the outdoor pipe railing on the third floor of South Hall. Using surgical tubing, wrapped twice, Bill could pull the balloon pocket the full 20 feet into a friend's room. Each launch vibrated the entire floor railing. Since acceleration burst a full balloon, he fired several half-filled balloons far down the street adjusting until he at last put one through the upstairs hallway open window of President's Hall dorm. It was applied physics.

Apartment on Eaton Avenue

I found an apartment rented by Pui-Mun Charles "Charlie" Wong on 303 Eaton. Charlie was from Kowloon Island in Hong Kong. Although only a year ahead of me, he always struck me as an older studious graduate. With impeccable penmanship, he copied his daily rough class notes in English into a fresh binder.

There was always rice bubbling within his rice cooker and care packages of chrysanthemum flowers from which he simmered sugared tea in a large aluminum pot.



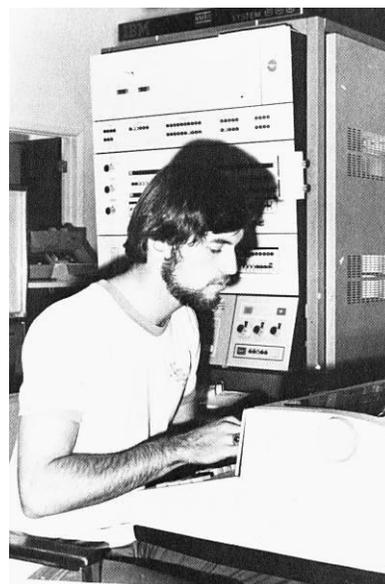
Pui-Mun Wong (Yearbook 1971)

Tea is made from the dried flowers of the chrysanthemum. Native to China, it is cultivated for over 2000 years. The beverage goes back hundreds of years in China and by 400AD in Japan. –www.chrysanthemumtea.org/ (edited)

We shared the \$68 monthly rent to Rose Abeyta. The apartment consisted of a great-room, a tiny closet of a kitchen, and a bathroom. We roomed from 6/1972 through 5/1973. I left for an Albuquerque job in 6/1973.

Upon my return in 1/1974, fellow Computer Science major Harry Muttart became my roommate in that same apartment for six months. We both came from high schools as the only "Harry". Thus, answering the phone "*Harry Here*" caused all sorts of purposeful confusion.

We both could read bass clef and he once let me try his electric bass in the apartment. The awkward guitar wrist position completely dissuaded me even though the fingering exactly matched my upright string bass.



Harry Muttart (NMIMT 1975)

House-Sitting

During breaks between quarters, professors scoured the campus for students remaining on campus to sit their homes during their vacations, with clear favorites of those students not in the party crowd. I sat for at least three professors, two of whom lived on faculty hill.

Kay Robert Brower (1928-2014), Chemistry and community orchestra - This master musician built his own harpsichord and an organ into his home. I stored my largely unused string bass under his harpsichord (and I practiced my bass sadly only once). He predicted at our wedding in 1975 that the marriage would last. He was right.

- www.nmt.edu/news/all-news/522-2014/4975-dr-kay-brower-1928-2014

Clay T Smith (1917-2003), Geology Department Head and Off-Campus Co-Op Coordinator - I took my stewardship role so seriously that I did not eat their food (since no permission given). It deeply embarrassed me to discover that I thus offended his wife who had freshly stocked their refrigerator just for my stay!

- www.ees.nmt.edu/deceased/324-memorial-smith

Abraham Kandel (b.1941), Computer Science - I most remember learning fuzzy logic from him to simplify complicated decision trees throughout my career. He was only ten years older, but even young professors carried significant authority with me. I devoured his home library of Jewish/Israeli history books, especially the still fresh 1968 six-day war. He taught from 1970 through 1978 as an Assistant Professor. He earned his BSc from Haifa Israel, MS from UC Santa Barbara, and his Ph.D. in 1977 after I graduated. It fulfilled a longtime wish to e-mail a thank-you in 2014, which he gratefully received.

- www.cse.usf.edu/~kandel/kandel.pdf



Figure 12 - Abraham Kandel (Yearbook 1971)

Albuquerque Apartment

In June 1973, on my first day as an off-campus student employee at Naval Weapons Evaluation Facility (Kirtland Air Force Base), I needed quick help finding an apartment within walking distance. One of the staff let me use their home phone since we could not use military phones for personal use. I found a small complex only a block away from the San Mateo gate with a first floor apartment at 1340 San Mateo Boulevard. I could walk to work, to the nearest grocery store, and to the coin laundromat.

Made of cinder block as is common in that area, I found it quiet (despite the nearness of two busy roads) and naturally cooled (despite hot summer months). The living room came furnished with matching wicker sofa, chair, and end tables. Compared to tight quarters and cast-off furniture that students used in Socorro, this one-bedroom apartment felt palatial. The elevated property allowed a pleasant view of the city out the large living room window. It was sparse but fully met my needs as a student. A fold-down Murphy bed on an end wall of the living room was used only once for an overnight guest.

Even being close to the base gate, the walk to my office was a long hike. With my first paycheck, I hunted up a used 10-speed bicycle and a multi-function stereo unit at a nearby pawnshop. I could thus bike home, but drafted a co-worker to help me bring the heavy stereo home. I felt almost in heaven with a classical radio station and another with Christian programming. We received only a two local stations 70 miles south in Socorro (country format from downtown and the student-run rock station KTEK on campus).

I could range a couple of miles on my bike and easily get to work. There was a church across the street and given my new 9-hour work schedule, I had little time to be idle.

Other than a suitcase of clothes and basics, I left my books and belongings in Socorro boxed in steamer trunk in a corner of my former apartment. My String Bass remained in Dr. Brower's living room. My executive desk stayed with my parents in Santa Barbara.

My refrigerator held minimal fresh food. I made dinners from the simplest and quickest ingredients. Until I met Anne, a typical dinner was a Kraft macaroni and cheese box mixed with a canned of drained sweet peas, I would make sack lunches of a sliced meat sandwich, a fruit, and some sort of snack. I did not feel at all impoverished.

Communal Monastery on Long Place

After a second six-month term in Albuquerque, I moved into the “Brothers House” at 505 Long Place, which had enlarged to two houses separated by a wire fence. The owner cut open the fence and a well-worn path appeared between the houses.

Lee Gagner coordinated the original house, saying in 2014:

I rented 505 Long Place (Fall 73) with John Rogers, Timmons, and Glenn (Eric) Sieferman. In spring 1974, it became the Brothers House with Robert Heid, Robert Kirby, [Michael Hambrick], and I. I think you were still with your Chinese roommate around the block [on Eaton Ave] that first semester [actually in Albuquerque but with some belongings stored with Charlie in that apartment.]

From fall 1974 to spring 1975, we expanded to two houses for eight people. Various other guys stayed there at various times, including you [spring 1975], Earl Eiland, Terry Asher, Daryl (Lobo) Whitby, Bert Cheney, Mike Hawley, and I probably forgot some. I left it in the summer 1975 [when both houses closed].

It moved to a house rented by Mike Hawley's older brother John Hawley. I do not know if it went beyond 1976.



Lee Gagner Wedding, 5/1976

A St. Paul UMC bulletin (6/1974) highlighted Lee Gagner (summarized):

A computer science major, Lee (b.1953) came from Church of Peace UMC of Minneapolis. Lee has grown in the Holy Spirit and fellowship. He ministers by driving those who need a ride to the Albuquerque airport. Chris Fox-Davies invited and escorted Dave Briscoe and Lee to the evening Wesley Foundation.

Lee wrote for the (Catholic) Weekend of Christian Challenge in 11/1975

Although we did not go to church often, I believed God existed and thought of myself as a Christian. However, my life seemed empty. A friend brought me to some prayer meetings often. The people had a joy and purpose that I did not have. I could see that "being good" was not good enough. In August 1970, I made an alter call at my friend's church and gave my life to Jesus. About six months later, the "feeling" of being saved disappeared. I had accepted Jesus but I did not have assurance and went back to materialism. In the summer of 1972, a woman asked, "If I were to die, would I go to heaven?" I could not answer.

I came to Tech in fall of 1972 and found Christians in whom Christ's love shone through, as I had never seen before. In February 1973, I received the Baptism of the Holy Spirit. This was the sign I was looking for of Jesus Christ in my life, of power to do Christ's work, and the full realization of Christ's love for me.

Before I returned in 1/1975, these believers created a wall-to-wall mosaic shag carpet in the living room from scrap pieces with the word JESUS. They made the “J” in the form of a fishhook. A kaleidoscope sunburst of colored strips radiated from the center. There were two layers of padding, an upside down carpet as the base to glue down the artwork, and finally the carpet of artwork. There was a slight bounce in this doubled carpet.

Robert Kirby commented in 2014

We rented from Joe and Rosa. My monthly cost of rent plus meals was less than \$35 a month after split among all the Brothers. It was [laughably] cheap. Nothing could touch such a low cost on campus or by renting alone.

Some of us did not have nor need a bed. I slept in my bedroll on the thick living room carpet next to the furnace. Debbie and I later rented one of the two houses after the Brother’s House closed [due to so many marriages in 1974-1975].

We had a rough start with proud bachelors who did not want to do unpleasant tasks of keeping a home. We had some ‘come to Jesus’ meetings to hammer out job-sharing rules for buying groceries, cleaning bathrooms, vacuuming rugs, and cooking dinners. Robert Heid, as oldest, helped establish [an equitable division of labor].



Robert Kirby (T.Asher 5/1975)

Communal meals rotated between houses. We purchased a communal washer and dryer. It was akin to fraternity life but we only saw ourselves as a roommates bound together by a love of Jesus, free of the distractions of drug, sex, and alcohol. Every student and guest came from a different denominational background and we invited pastors in town to our monthly communion services to vouch for us as orthodox believers and not a new cult.

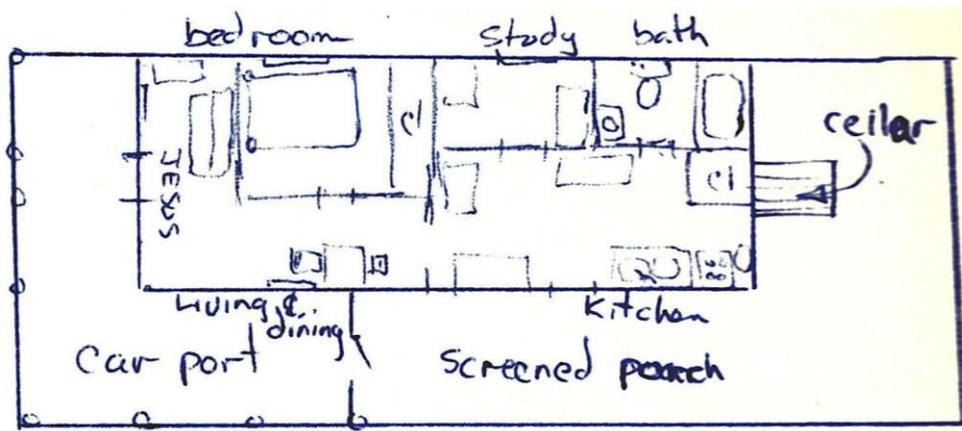
With a common high ideal of marriage, we fully expected to be bachelors during college. We almost held misogynic opinions. This pool of chaste boys capable of keeping a house became a magnet for the believing girls who within the next six months married most of us off causing the two Long Place homes to distribute assets due to lack of renters.

Married Life on Center Street

Anne and I married in 5/1975. Our engagement, courtship, wedding, and graduations appear in the Chapter **Anne Rittenhouse**. We moved into a small house at 310 Center Street. It had thick adobe walls. Among the distributed Brothers House assets, we got the JESUS rug trimmed down to fit our tiny living room nook. When it rained, the pitter-patter on the tin roof helped us sleep. In 1975, we paid \$70 a month rent. The exterior remained fully unchanged in 35 years when I visited it in 2012.



Figure 13 - Our first home - 310 Center, Socorro – 2012



Map 4 - Floorplan Sketch of 310 Center - 1975

My 1975 sketch shows non-existent spaciousness. A queen bed filled the bedroom with four inches to spare on either side, forcing us to shuffle sideways to get in. The sofa nook seemed only 6 x 6 feet. A 4 x 5 foot pantry doubled as a study and typing room.

Boxes of our combined textbooks and possessions filled half of the 8 x 10 foot cellar. Boxes from friends shared with dust and cobwebs the other half of that cellar. Within the screened porch, a sealed rear door of a visually hidden adjoining home stood across the cellar entrance. I never saw neighbors or lights in that house. I never asked.

A small chrome/linoleum kitchen table for two people served as our dining/study area. The sturdy four-burner gas stove/oven had seen decades of service and badly needed cleaning. An odd odor filled the kitchen when we first baked a casserole in the oven until it became overpowering. The meal was fine, but between the oven and the active top burners, laid a freshly cooked mouse. I had to disassemble the top to clean out the mess.

The property owner, David Jones Jr., gladly allowed us to repaint the interior and even paid for our chosen colors. We painted over the odd combination of walls of baby blue, pale yellow, hospital green, and ceilings in glossy pink. David Elsbernd and Sandy Arp helped us paint most of the interior a flat mud tan since the plastered walls were adobe.

According to our wedding book, we repainted the bedroom a light blue, bathroom pink, and kitchen golden yellow. We painted over the pink ceiling in each room to match the walls. Granted the front half felt a bit like a cave surrounded by the mud color, but it felt mentally cooler inside during the summer. Today, white is the best interior color.

During our year there, a fire broke out late at night in a small historical adobe church only ten feet away. David Jones owned it for storage. I threw buckets of water through a burning windowsill while in my pajamas. It burned to the ground except for the adobe walls. Anne's father knew about its history but I lost his brief letter of explanation.

Academics

The Computer Science Department began in 1966 as one of the oldest in the nation.

John Shipman (1949-2017, CS student 1966-1970) wrote in Paydirt (edited):

Tech's first computer arrived in 1966. This IBM 360/40 [before our model 44] weighed about a ton and was six feet long. It did not have things that we take for granted. It had no disc storage, just four tape-drives each about the size of a telephone booth. Most computers had a typewriter-like operator console, but this model had none. Input was only through punched cards, and operator messages came out on the line printer. The Tape Operating System (TOS) was incredibly ancient and backwards even then.

The only possible operation was to compile and run a FORTRAN program. The operator mounted four tapes, one on each tape drive. The system tape contained the operating system, FORTRAN compiler, and loader. The other three drives held scratch tapes for intermediate results. The operator loaded a deck of punch cards, rebooted the operating system from tape, and watched the tapes spin.

The front panel had banks of blinking amber lights that tracked normal operation. Experienced operators could watch the lights flash and get a good idea of what the machine was doing. A double row of red indicator lights on the upper left corner of the panel only lit up when something bad was happening.

Tech had no money for current devices. IBM had a line of cheap peripherals [from old IBM 1401 systems]. Their 1442 card reader and 1443 line printer broke more often than the processor. They designed this printer [to log a copy of] console messages, and not for continuous operation. IBM did not admit it, but they rated it only for a 25% duty cycle, but we used it eighteen hours a day!

www.infohost.nmt.edu/~shipman/write/torture.html (Link no longer available)

Computer Science (NMIMT recruiting brochure, 1970, edited extract)

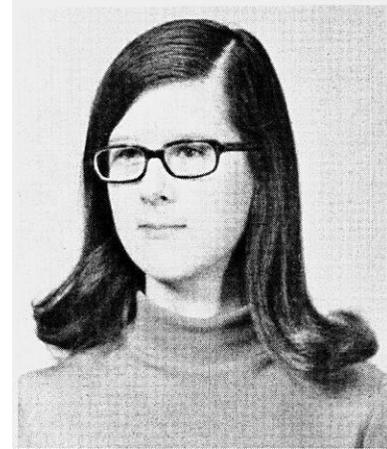
The Computer Center owns an IBM 360/44 with 131KB of 1-microsecond [CPU] memory, 90MB mass memory, card reader/punch, 1000-line-per-minute printer, plotter, tape drives, and peripheral data adapter. The 360/44 PS/MFT operating system supports six foreground jobs and one background job. It provides [print] spooling. Languages: FORTRAN, 360 Assembler/F, SNOBOL, LISP, PL360.

Computer Center - 1971

Sophomore Mariam Moore described the computer in early 1971:

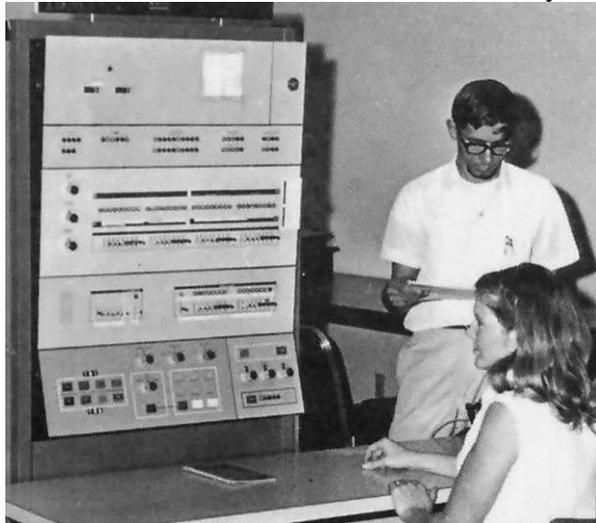
The computer facility in Workman Hall is open to students 8am to midnight, but lunch or dinner is a lost cause. With an operator friend, you can try between 1 am and 8 am while people run payroll or bookstore inventory. Wednesday is not good because the computer engineer spends all day checking the machine.

The IBM 360/44 has more breakdowns than cooperation. We have six keypunches; punch deck duplicator; card reader; line printer; four tape drives; and a plotter. We have languages FORTRAN, Merlin, FGA, SNOBOL, and PLI.



Mariam Moore (Yearbook 1971)

IBM 360/44 Console [90MB of Memory]



Workman Center

Card Reader



Programming using a 029 Keypunch

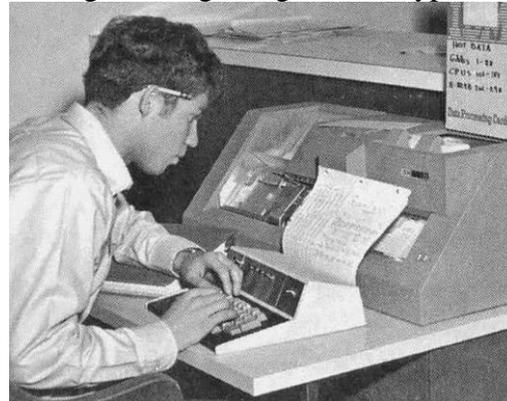


Figure 14 - IBM 360/44 in Workman Center (NMIMT Recruiting 1970)

Calculus Crash and Burn

I was not the math prodigy my public school teachers thought. However, my consistent ‘A’ grades in Math, earning the prestigious Math award for 1970, and 98%ile ACT score in Math gave me a pre-college sense of invincibility. That is, I felt self-assured until I took my first year of Calculus against the other top 10% of math students in the country. Later in 1981, 45% of incoming freshman had ACT scores in the top 26-to-36 bracket.

The campus treated three freshman Calculus series and two Physics courses as washout classes. These large entry-level classes quickly sifted out the best from the nearly best.

Barely obtaining ‘B’ grades gave me a profound shock about whether I could be a mathematician. The coursework felt like so much rote memory of equations than understanding the rationale for creating those equations. This memorization angst became worse by the time I took the Differential Equations class. Regardless of our chosen major, all of us eventually mastered the necessary mathematic rigors for follow-on courses with help from a CRC (Chemical Rubber Company) reference book.

My favorite mathematics courses emphasized real applications, such as Probability, Combinatorics, Number Theory (approximating analog calculus equations for area and volume using discrete integration techniques in a computer), and Stochastics. Theoretical mathematics such as Fractals and String Theory left me cold.

Chess and Word Processor Programs

While still a freshman, I taught FORTRAN for Socorro Community Education outreach of New Mexico Tech in the spring 1972 and repeated it a year later in spring 1973.



Figure 15 - Taught FORTRAN in Community Education

In my sophomore year, I wrote a chess program in FORTRAN on keypunched cards for a class in Combinatorics to count all the possible moves of any given custom board set-up. For another class, I wrote a rudimentary word processor to format text into two columns from keypunched cards using my own designed HTML-similar mark-up controls.

I revived that Chess program in 1977, removed the counting logic, and made the program play a decent novice-level game for an Open House at Lawrence Livermore Lab (LLL) in 1977 and again in 1981. I found the faded green-bar line-printer output of that 1981 version, scanned it in, and converted it to run as compiled BASIC in Windows in 2014.

The other program became foundational for my HBWord processor in production use at LLL 1980-1985. I describe HBWord and Chess10X in the Chapter **Glory Years**.

Pre-Digital Math

My first three years required a basic knowledge of a slide-rule. Some freshman classes prohibited the tool as a cheating device. Upper classes depended upon the slide rule as the sole means for rapid calculations without programming a mainframe computer.

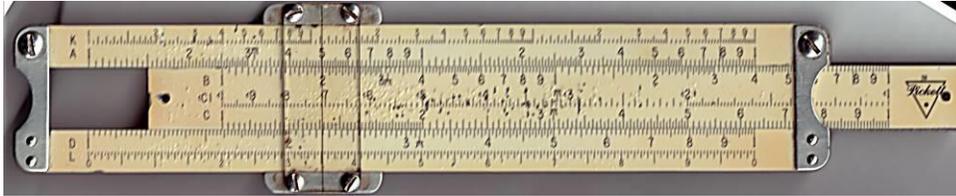


Figure 16 - Picket-200 Pocket Slide Rule, 6 inches c.1953

My father briefly used this above slide rule at McDonnell Douglas aircraft in 1953 as a drafter and never thereafter. His unit has surface pitting from age but the photo gives a simple example of multiplication: 2.5 (Row A) times 2 (Row B) yields 5 (Row A). Using the identical alignment: 5 (Row A) divided by 2 (Row B) yields 2.5 (Row A). Aside from logarithm exercises, I rarely needed a slide rule beyond such simple math.

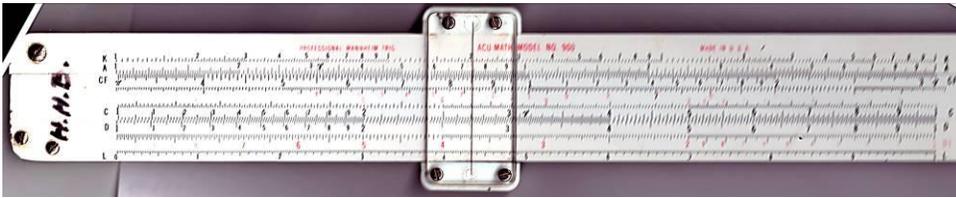


Figure 17 - Acu-Math 900 Slide Rule, 12.5 inches c.1960

Most students in 1971 sported the low-cost “Professional Mannheim Trig (Acu-Math 900)” slide rule. The red numbers on mine faded from constant fingering. Class answers only needed accuracy to three digits.

The computer laptop was science fiction in 1975. We coveted such devices in Kubrick’s 1968 film “*2001: A Space Odyssey*”. Only large companies could afford the HP-35 portable calculator at \$395 in 1972.

I jealously eyed students who could afford a pocket-sized “four-banger” (plus, minus, multiply, divide) at a cost of \$150 in 1973. Imagine \$800 in 2013 as the equivalent.

My calculator in 1974 was less than \$100 and well worth my student savings from Naval Weapons. I purchased from Montgomery Ward and beat the thing to death in my senior year. Professors prohibited its use during exams. Thus, my senior level math/science exams fell back to the slide rule. By 1977, simple calculators cost less than \$8.



Computer Science Degree

Unlike a business degree in information technology, computer science emphasized how computers and algorithms functioned. From my transcript, the following hints at the flavor of a computer science degree in the 1970's punched-card era. I took two semesters each of Chemistry and Physics, and a semester each of Geology and Biology.

We still needed basic liberal arts that I could not evade. These included College English, Civilizations, Principals of Economics, English Literature (I hated Shakespeare), Speech, Intro to Arts/Music (see below), Elemental Spanish, and a Writing Class.

New Mexico Tech, Courses of Instruction, [Fall] 1972

(Extract only showing Math courses taken ... most I would fail now in 2020!)

DEPARTMENT OF MATHEMATICS

Professor: Friberg

Associate Professors: Arterburn, Ralph Ball (Dept Head), Morgan, Alan Sharples

Assistant Professors: Dubbs, Gutjahr

[Math 131, Calculus and Analytic Geometry I](#) – Ball, Dubbs

[Math 132, Calculus and Analytic Geometry II](#) – Dubbs

[Math 231, Calculus and Analytic Geometry III](#) – Upchurch

This is an integrated set in calculus, analytic geometry, and elementary differential equations with applications: the mean-value theorem, indefinite and definite integration, transcendental functions, vector analysis, solid analytic geometry, partial differentiation, multiple integrals, infinite series, complex numbers/functions.

[Math 234, Intro to Linear Algebra](#) [We called this “Differential Equations”]

Ordinary differential equations, series solutions, transform calculus. - Arterburn

[Math 335, Applied Analysis I](#)

Matrices and linear transformations, simultaneous linear equations, bilinear and quadratic forms, eigenvalues and eigenvectors.

[Math 351, Intro to Mathematical Logic](#)

Sentential calculus, truth tables, proof, duals. Boolean algebra and Venn diagrams. Quantification theory and proofs. Sets, relations and functions. Intro to formalization of theories.

[Math 355, Intro to Higher Math I](#)

Fundamental symbolic logic, sets, relations, functions, equivalence relations, cardinal numbers, abstract algebraic structures, number systems.

[Math 381, Intro to Combinatorial Math](#) [This inspired my Chess-playing program]

Basic representation and procedures of combinatorial analysis. Generating functions. Permutation and combination problems. Elementary graph theory. Trees, circuits and cut-sets. Planar and dual graphs. Enumeration of trees. Intro to Polyas theory of counting. The four-color problem. Generation and procedures for computer applications. – Kandel (Comp.Sci.)

[Math 382, Probability](#) [This inspired my 1980's game software]

Basic discrete and continuous probability. Common types of univariate distribution functions. Expected values, weak law of large numbers, central limit theorem, estimation of parameters.

[Math 486, Intro to Stochastic Processes](#) [This fed into my MSBA degree.]

Conditional probability and probability models. Markov chain theory. Intro to renewal theory and continuous time Markov processes for operations research, engineering, and the sciences.

New Mexico Tech, Courses of Instruction, [Fall] 1972

(Edited extract only showing Computer Science courses taken)

DEPARTMENT OF COMPUTER SCIENCE

Associate Professors:

Ralph McGehee; PhD, North Carolina State; Applied numerical analysis
 Tom Nartker; PhD, Texas A/M; Languages, simulation, interactive code (Dept Head)

Assistant Professors:

Abe Kandel; MS, UC Santa Barbara; Languages, switching/automata, pattern recognition
 John Slimick; MS, Stanford; Computer architecture and computer-based instruction
 Lawrence Yelowitz; PhD, Johns Hopkins; Structured Programming; Correctness Proofs

Lecturer:

Judith Rane; BA, Colorado College; Systems Analysis

CompSci 111, Foundations of CompSci

Nature and scope of CompSci, linguistic concepts, formal definition of languages, and nature of information processing machines. Concepts with physical realization of information processors. Labs devoted to computer verification of algorithms [specific to] CompSci. – Nartker/ Merillat

CompSci 112, Algorithms and Algorithmic Languages

Properties of algorithms; analysis of numerical problems and development of algorithms for their solution. Syntactic description and comparison of FORTRAN, ALGOL, PL/1 and APL. Linguistic facilities illustrated through computer solution of lab exercises. – Nartker/ Lipsie

CompSci 212, Non-numeric Languages and Symbolic Computation

Intro to list-processing languages and concepts; problem-solving and heuristic programming. Symbol manipulation languages and their application in text handling and translation.

CompSci 221, Intro to Systems Programming.

Intro to systems programming and operating systems: assemblers, loaders, and interpreters. Labs emphasize use of systems implementation languages with examples. - Yelowitz

CompSci 321, Compiler Writing

Implementation of compilers for higher-level languages: parsing, symbol table management, code emission, and code optimization. Each student [must] design and implement a small compiler.

CompSci 332, Intro to Switching and Automata Theory

Boolean algebra and switching functions. Combinational switching circuits. Maps and other methods for minimization of Boolean functions and combinational circuits. Functional properties and their utilization. Tree methods. Threshold logic. Intro to sequential machines. Finite state models. The minimization problem. State and system identification. Regular expressions. Synthesis of finite-state systems. State assignment and state decomposition. Serial systems.

CompSci 410, Numerical Methods for Scientists and Engineers

Basic [scientific] numerical methods including solution of linear and nonlinear equations, classical optimization and linear programming, least-squares regression, time series analysis, and solution of differential equations. Labs use numerical methods in advanced [scientific] applications

CompSci 414, Data Structures,

Study of information representations and their relation to processing techniques; strings, arrays, trees, lists, stacks and queues. Dynamic storage allocation; searching algorithms for trees and lists: sorting algorithms and structures in data management systems.

CompSci 422, Operating Systems

Review of batch processing systems, their components, and operating characteristics: structure of multi-programming systems; time-sharing and multi-processing systems. Extensive time devoted to current literature and discussion of existing operating systems.

CompSci 431, Design of Digital Computers (LSI and MSI)

Boolean algebra; analysis and synthesis of combinatorial and sequential networks. The design of a simple digital processor, arithmetic unit, program control, memories. Various existing forms of machine organization.

CompSci 440, Intro to Operations Research [This inspired my MSBA degree.]

The nature and scope of operations research: optimization, mathematical programming, network analysis, queuing theory, Markov chains, and discrete simulation. [Emphasis upon] applications in CompSci and [practical] engineering design.

CompSci 491, Computer Architecture

Language Courses

[I knew FORTRAN from high school]

CompSci 102, COBOL – Nartker/Lipsie

CompSci 201, Assembly Language

CompSci 202, PL360

CompSci 203, SNOBOL

Computer Science Brochure (NMIMT Recruiting 1970)

Computer Science at Tech provides professional training toward the intelligent use of computers in a wide variety of applications. Students obtain programming and systems skills with a thorough comprehension of the logical foundations necessary for analysis of information-processing systems.

Students need a thorough background in mathematics and sciences with sufficient analytical ability to define problems, enough imagination to devise computer solutions, and the persistence to complete solutions.

Few Computer Science Students

Some of my upper level computer courses had eight students. As nearly private tutoring for undergraduates, we could not shirk our assignments. From 1976 to 1978, only fifty students were computer science majors although many took the core computer courses.

In 1982, the Department worried most of the 180 listed computer science majors dropped within their first year, being unaware of the rigors of this science-heavy degree.

Even with those 180 declared majors with 22 students in the microcomputer introduction class, only eight (8) students received a BS degree in Computer Science, three of which were in the new Scientific Applications Programming Option. I am confident that all eight new graduates legitimately earned their hard-won degree.

Love of History – Late Bloomer

I never appreciated history in high school. I slept in “social studies” classes. It was dreadfully dull and dampening even to the most determined student. Only in my junior year at Tech did a professor communicate a full-on passion for history.

He had polio or palsy and walked in by those crutches having a clamp on the forearm, dragging his feet behind him. My initial thought was that this would be an unpromising class. Looks deceived me. Dr. John McKee used the book "*A History of Art and Music*" but gave a lot more history than its content. I kept that textbook as a useful reference.

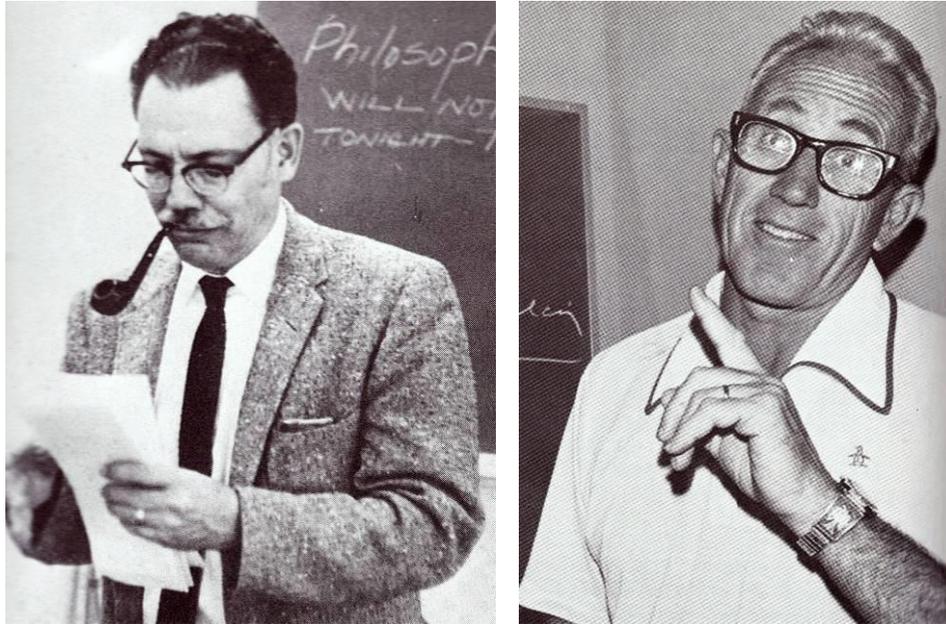


Figure 18 - Dr. John McKee (1971) and Dr. Paige Christiansen (1976)

Dr. Paige Christiansen wrote the 75th anniversary college history in 1964, published by Tech called "*Of Earth and Sky*". That book launched the Socorro County Historical Society in 1965, which produced eight booklets as of 1974. I bought a copy of the six available of the original booklets. Dr. Christiansen, as a Southwest Historian, edited the initial monographs at least until 1968. Dr. McKee and Dr. Spencer Wilson co-edited the larger 1973 and 1974 books.

A 1974 photo collection book came from glass plates by Joseph Edward Smith, the second commercial photographer in Socorro 1884 through 1896. I later purchased a reprint of the first college admissions catalog for the 1893-1894 year. The reprint of the original cover carries a hand-written signature of that photographer, Joseph E Smith.

In late 1975, I bought Dr. Christiansen’s book published in 1974 by the Bureau of Mines called "*The Story of Mining in New Mexico*". In 1988, Dr. Wilson, the Bureau of Mines, and the Historical Society helped Bruce Ashcroft write "*The Territorial History of Socorro*". Bruce graduated from Tech in 1972 but I did not know of him.

Socorro Historical Society (I edited out my sophomoric enthusiasm)

Socorro has a history. Historians statewide accessed old newspapers, old insurance building maps, and the archive of New Mexico's Universities concerning Socorro County. These historians wrote articles concerning architecture, mining, local yore, local people, and local sights.

*Is mining your [interest]? Go to the Bureau of Mines (Workman Center) and check out Dr. Paige Christianson's new book: **The Story of Mining in New Mexico**. It was published in-house and thus at low price [\$2.50]*

How about photos of Socorro, Magdalena, [abandoned] Kelly [Mine], and Geronimo? Buy volume 7 of the Socorro Historical Society publications.

The Society (SHS) issued seven history assessments of Socorro (three out of print). Each issue contains several well-written articles by various SHS members. Our Dr. Paige Christianson is among them.

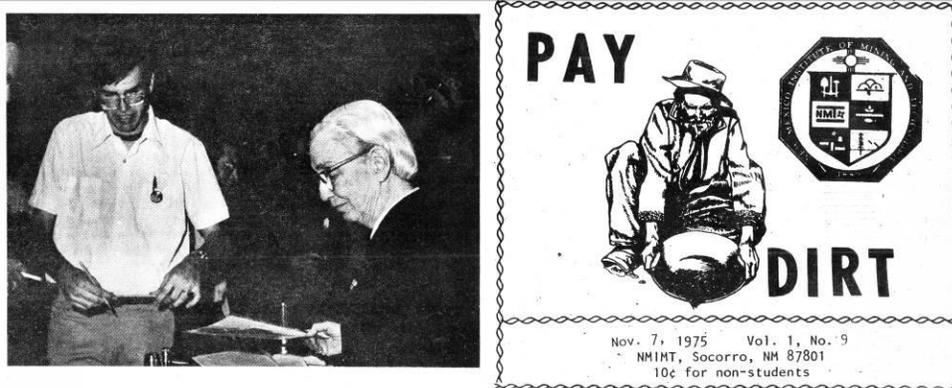
Few places in Socorro handle these booklets. They are the Tech Bookstore, Dr. Spencer Wilson, Socorro Office Supply, and Hilton Drug.

Regarding the issues out of print, contact any member to look at their personal copies. I bemoan their limited circulation. Dr. John McKee said with substantial interest, these issues could be reprinted (minimum of 50 paid in advance). Let us [show some interest] you history buffs!

Harry Briley, PayDirt [Campus Newspaper], 12/5/1975

Computer Pioneer

I heard computer pioneer Captain Grace Murray Hopper, US Navy Retired. She started out with vacuum-tube room-sized behemoths and created the verbose COBOL language for business. The PayDirt photographer caught us together in this front-page photo.



COMPUTER SCIENTISTS--Harry Briley, Computer Science major, takes some of the information handed out by Capt. Grace Murray Hopper following her speech here October 28.

Figure 19 - Captain Grace Murray Hopper (PayDirt, 10/28/1975)

Campus Culture

No Free Radicals (... a physics pun)

The normal pulse at Tech was serious education. We were in competition with MIT and Cal Tech. Radicals on either the left or the right wing would not find recruits. The petroleum roughnecks probably would have tied them city boys up on the weapons testing range for the staff to find the next morning. I exaggerate, but not by much.



Figure 20- TERA Army Tanks (S.Cather 1974)

Numerous tanks arrived by railroad in summer 1974. TERA at once started shooting at them to analyze lethal “spalling” (metal fragments that explodes off the inner wall when hit outside by a projectile). A few students hot-wired those army tanks to spin donuts in the desert (inspired by the 1970 movie “*Kelly's Heroes*”) as Wild West stupidity. These unusual exceptions were not politically motivated. We nominated these daredevils for the Darwin Awards for driving around an explosives range near live ordinance.

I reported in the Royal High Alumni Newsletter 4/1972 (edited):

Praise the Lord! New Mexico Tech has a different atmosphere. New Mexico has different temperatures, styles, study habits, brains, drunks, everything!

New Mexico has the highest percentage of PhD's in the U.S. and the highest drunk factor. Is there a correlation? Our president [Dr. Stirling Colgate, former astrophysicist at Lawrence Livermore Lab] is heir to the Colgate-Palmolive fortune. Tech (student population: 871) has the richest per student ratio for State funds. Tech is [funded well] for atmospheric physics, its paid-for [used] IBM 360/44, digitized astronomy, and grants for physics projects.

Students for a Democratic Society (SDS) radicals and liberals have nothing to fight for or against [on our campus]. The [liberals] already have it, as do the conservatives. A situation of apathy exists because of this. It is cheaper to attend here [as an out of state student] than to Cal Poly at San Luis Obispo [with in-state tuition and high room rent]. Most of this [inebriated science culture] is alien to my personal traits. I praise the Lord anyway. It is different.

TERA: Tech's Fourth Dimension (edited extracts)

The Silver Bar, New Mexico Tech, [Spring] 1975, Volume 1, page 18

Terminal Effects Research and Analysis (TERA) scientists at Tech work on aircraft vulnerability to damage, warhead design, and evaluation of gun-fired projectiles. The TERA complex consists of a number of facilities, including a multimillion-dollar field laboratory on a 10-square mile area west of the campus.

Primarily with Navy support over 30 years, the facilities, unique in some aspects, have a high level of excellence, flexibility, and capability for ordnance research.

Other using agencies include the Army Missile and Armament Commands, the Army Ballistic Research Labs, and the Air Force Systems Command. Industrial corporations include Boeing Aerospace, Falcon R&D, General Electric, LTV Aerospace, and Sandia. TERA is engaged in 25 contracts that require highly sophisticated instruments and components manufactured in its machine shop.

TERA employs 30 people full-time and about 40 Tech [part-time Co-op] students with another 30 students "on call" for special projects.

TERA under Project Supervisor Lamar Kempton, utilize more than a dozen test sites in the field laboratory with high-speed cameras, flash X-ray units, and pressure-time-velocity recording devices.

Tech's computer center analyze test data. The TERA team prepares a computer "simulation" of the test problem. Based upon a review of the computer results, solutions are evaluated prior to the selection of the course of actions.

Fifteen patents involving designs of warheads and other devices were issued to TERA personnel. TERA was deeply involved in pioneering design, test and evaluation for the TALOS, TARTAR, and TERRIER missile warhead systems for the Navy. In 8/1957, the Secretary of the Navy granted a Distinguished Public Service Award to Mr. Kempton, citing "the first real break-through in explosives warhead design since the conception of guided missiles". Kempton and his eight-man research staff have ordnance-research experience that can develop complete experiments, analyze data, and [create] specialized equipment.

An example was the "Ballistic Efforts Dynamic Data Device", or blowdown tunnel, which releases a blast of air at speeds faster than sound. Three liquid oxygen tanks salvaged from Atlas missile sites were welded together to form a horizontal stainless steel pressure chamber 115 feet long and 10 feet in diameter. The expanding gas generated by rapidly burning vaporized kerosene inside the chamber assess vulnerability of components to an exploding warhead. Aircraft tests cost over a million dollars, but only 200 dollars for a blow-down test.

The other main branch of Tech, as mentioned above in my high school alumni news, provided astrophysics research led by Dr. Stirling Colgate, and atmospheric lightning research. Both the lightning facility and a telescope operated at Langmuir Laboratory atop the 10,600-foot peak in the Magdalena Mountains, seventeen miles from campus. Each project required the use of the entire computer center on rotating evening hours.



Figure 21 - Digital Astronomy Team (NMT Catalog 1972-73, p21)

[Graduate] students who worked part time on the Digitized Astronomy project included [L-R] April Stevenson, Paul Merillat [a computer science instructor], and Richard Carlson. The Langmuir telescope sent numerically coded “pictures” of stars and other phenomena to the IBM 360 computer by microwave link.
–NMT Alumni newsletter, 2/1973

Pioneering LLNL/LANL Physicist Dies (extracted):

Stirling Colgate, a physicist who played a prominent role in the early days of Lawrence Livermore National Laboratory (LLNL), died at his home in White Rock, NM 12/1/2013. Colgate worked at LLNL from 1952 to 1964. A New York City native, Colgate attended Los Alamos Ranch School from 1939 to 1942, when it closed for establishing the secret laboratory that developed the first atomic weapons and that became Los Alamos National Laboratory.

Although Colgate did not rise in managerial ranks at LLNL, he left to become the president of NMIMT in Socorro ... until 1975. He joined the theoretical [physics] division at Los Alamos in 1976, where he remained until his death.

- Jeff Garberson, The Independent (Livermore) 12/12/2013, page 9

Feeling a Draft

The non-declared Vietnam War was drafting large swaths of youth. My draft card listed me as number 144. Attending college was guarantee of a draft deferment in 1971.

The draft into the Army greatly concerned me. My 20/400 eyesight prevented enlistment in the Navy (my preferred branch) or Air Force. My 76-inch height prevented me from joining the Submarine corps or the Coast Guard. The Army drafted everybody else.

They called all who would be 18 years old for calendar year 1972 beginning at number 1. Those with low numbers immediately enlisted or drove to Canada. We sat in the Student Union room glued to the evening television news in fall 1971 to hear the latest numbers.

I think they called up to number 130 before reaching their annual quota. This meant they drafted (or induced enlistment of) over a third of all 18 year olds in the country. The following year held minimal risk to me because they would call up all other 18-year olds prior to restarting with the former list of us now 19 year olds.

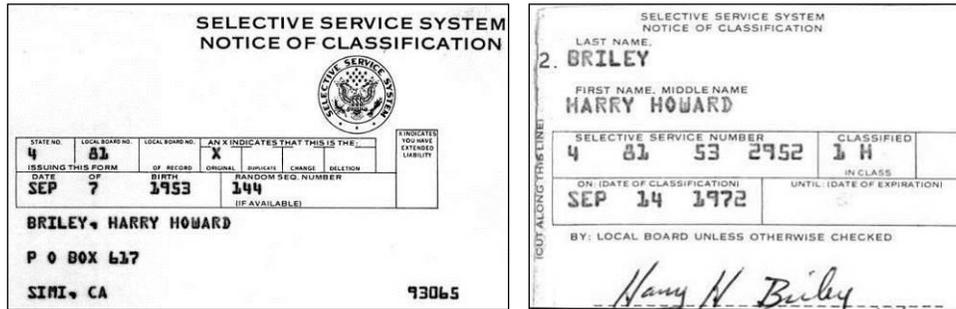


Figure 22 - Military Draft Cards – 1971 and 1972

I registered by mail from at Tech (recorded 9/10/1971). My draft # was 4-81-53-2952 with classification 1-H (Registrant not currently subject to processing for induction).

My mother sent the following news clipping asking whether I claimed a deferment. I would have sought deferment had the draft gone past my listed number.

Simi Valley Enterprise, 1971

New regulations effective Dec. 2 provide that registrants will be required to keep their registration and classification cards only until they are liable to be called for military service. This means age 26 for those who receive no deferments and 35 for those who did. Persons over those ages will no longer be required to report changes of address to local board.

Funds to Help Parents

Early in college, I sent funds (from my Gindling Hilltop Camp summer earnings in high school and my campus below-minimum wages) to my mother as a loan to make their ends meet. She faithfully paid it off. A letter in 11/1974 to my fiancée Anne said the loan was for \$1350, with \$940 due in 1/1975, and \$410 thereafter at \$10 a month.

This huge amount for a poor college student took most of my savings. A letter in 2/1975 references the \$10 payment. My father was likely mortified that he needed help from his children, but never said anything to me. It gave my mom the legitimate excuse to write each month to stay in contact. It was nearly a one-way conversation, as I rarely wrote home as a clueless student about maternal concerns.

Flashlight War

On moonless dead dark nights in the early 1970s, we sometimes played flashlight war (Capture the Flag) on the Tech golf course wearing dark clothing, charcoaled faces, and paperboard tunnel tubes for our flashlights to prevent observance from the side. It felt like an early version of nighttime laser tag and paintball. The flags on opposing greens were the goal for each team.

A loud scream that pierced the night sky meant I was caught in the beam of a momentary blinding flash five feet in front me, while the culprit slinked off to further dirty work.

Chamber Music

My parents drove out in the Vista Cruiser station wagon to bring my bulky string bass in 9/1971. After college, they brought my executive desk from Carpinteria in 1976 to my apartment in Livermore. These were expensive trips for them and I deeply appreciated these two specific treasures from home. I use both forty years later.

Dr. Ralph Ball (math), concertmaster, kept me in line for being often out of tune and Dr. Kay Brower (chemistry) stored my little-used bass under his kit-made harpsichord in their home in vain hopes that I would practice. Our fledgling chamber orchestra of 21 players played Haydn's "*Trumpet Concerto*" at our 12/5/1971 concert at the base of the stairs in the basement of the new Speare Library. Sometime in 1972, we played Haydn's "*Seven Last Words of Christ*" in the 1614 adobe San Miguel Catholic Church.



Figure 23 - Chamber Orchestra (G.Clevinger 1971)

That spring, 1972, we briefly formed a quartet of Terry Asher (flute), Linda Loulan (Simmons, clarinet), and J.Paul Dieniger (trumpet). J.Paul was an accomplished musician. Terry and Linda were believers in Jesus. Terry was the college newspaper photographer and a close friend of Anne. He took our wedding photos and loaned his family's rustic cabin at no cost for our honeymoon up near Dixon's Apple Orchard. After graduation, I lost contact with Terry. I regret letting that friendship drift away.



Figure 24 - Quartet Concert - spring 1972 and a close-up of above

Off Campus Music

During my 1973 Co-op stint in Albuquerque, I enrolled for the Lobo Marching Band. The weekend practices matched my weekday work schedule and I got bragging rights for being a registered UNM student. After two years since the Highlander Marching Band, I fully forgot the fingering on the Sousaphone. My lips and fingers soon recovered their nimble memory for doing two-octave scales with only three buttons. Our full rank of Sousaphones made the half-time pinwheels and other field maneuvers especially fun.

In one children's sermon during a morning service at St. Paul's UMC, I borrowed a Sousaphone from Socorro High School tooting out "*If Any Man Come after Me*" (from *Maranatha! Psalty children's albums*) while walking down the church aisle! I want that joyful song played by a small Marching Band marching through my memorial service.



Figure 25 - Lobo Marching Band on road trip to Arizona game

Miracle of Stopped Rain

God affected my natural world, not often, but dramatically enough to get my attention. There was a steady miserable rain during one Lobo home football game. Two Christians in the marching band and I pulled aside up to the walkway between the bleacher sections to pray just before half time. We simply but earnestly asked for the unrelenting rain to let up. The heavy rain so immediately stopped with sudden abruptness that the final raindrops loudly hit the ground in a final 'thwack'. It was not the expected slow fade.

Our jaws fairly bounced off the cement and we let out a whoop of "*Way to Go, God!*" We immediately had to go down to the field for our show. The sky was clear and stars seen during half time and the rest of the game. The rainstorm ceased only over the area surrounding the UNM football stadium. The rest of the city got soaked. It remains unexplained why God did this for a secular event, but he seemed to delight in a few of his drowned rats to ask for a miracle (not demand one, but to ask in simple trust). Jesus said, "*Where two or more are gathered in my name, there I will be in the midst of them ...*" We termed such miracles as "God-cidences".

Pit Orchestra

In 10/1973, I played in a pit orchestra of ten instrumentalists with a microphone pick-up for a Children’s Play at the First Church of the Nazarene in Albuquerque. My work manager attended here. Once he found out that I played string bass, he quickly recruited me for the play “*It’s Cool in the Furnace*” as portrayed the book of Daniel.



Figure 26 – Cool in the Furnace (L.Oliver 10/20/1973)

I mailed this photo at an unknown date in 1974 to Anne at Tech. We had a brother-sister relationship and the inscription indicated that I had positive feelings towards her.

Timeline

Since I arranged this chapter topically, the busy college timeline confused even me. This table summarizes various event markers found in this chapter.

Year:	1971	1972	1973	1974	1975	1976
Winter/ Spring	Simi Chap. 3	Socorro TERA, LWM	Socorro	Socorro Eaton Apt. w/ Muttart	Socorro Brother’s House	Socorro Ruptured Appendix
Summer	Socorro Dorm, Preaching	Socorro St. Paul’s, Eaton Apt. with Wong	NWEF San Mateo Apartment	NWEF Madeira Apartment, Court Anne	Socorro Married	Livermore Chap. 5
Fall	Socorro, Grand Canyon	Socorro, Chaplain, MSCH	NWEF Anne starts at Tech	NWEF Engaged	Socorro, Catholic Weekend	Livermore

Table 1 – Timeline 1971-1976

Rural Trust

Dr. Howard Little, DDS, became my dentist out of sheer necessity in 1972. My early farm years with fluoride protection in the water had long worn off and absence of annual checkups paid me back painfully. Nearly all of my rear teeth had significant cavities. Without dental insurance, the cost dug into my meager campus earnings. The penalty for poor dental care created a lifelong drive to prevent a repeat episode.

As a dry-land farmer, Dr. Little needed help one late summer to bring in his hay bales. He hired a few students from church. We stacked them onto a moving flatbed in the field and then stacked them a second time under his hay shed roof. I might have volunteered just for an outdoor break from school. By late afternoon, I had to leave for class. He directed me to the farmhouse, told me to walk into the kitchen, and collect my pay. No one was within shouting distance. The house was unlocked and the kitchen table sported several sets of loose cash beneath our names. Howard left the keys in the ignition of his car. In my former Los Angeles area, anything not bolted down and locked would walk.

His trust reflected a more innocent farming era, which in 1972, many of us students had not experienced. I never lost my California wariness and locked everything in sight.

Dangerous Episodes

For as sleepy a town as Socorro, two physical attacks happened to the least offensive and most genial students on campus in 1973. A gang from town beat Terry Asher terribly, my wedding photographer to be, at night on his way home. They broke his jaw, knocked out some teeth, and broke his arm. He spent a semester with his jaw wired shut and would bring a food blender to dinner with us in town to drink his meal through a straw.

They likewise attacked Robert Kirby that year:

These younger Hispanics hid in the parking lot to catch a student walking home off-campus after evening classes. Three of them caught me and one hit me hard in the jaw knocking my glasses off. I was a [longhair] geek with those black rim glasses broken at the nose and held together by tape. I now held the two parts of my glasses one in each hand, and started witnessing to them.

I learned they had no hope and were jealous of the smart students who had a bright future. They were jobless and bitter at our presence. As I talked about Jesus, the guy who hit me wept. I could have easily wound up like Terry Asher.

The Wild Side

Two events promoted the wilder side of campus life. St. Patrick's day provided a chance for 1) hazing twenty deserving freshman who made a nuisance of themselves among the drinking crowd, 2) cajoling all freshmen to wear their clothes completely inside out with their underwear dyed green, and 3) a race up 'M' mountain with a sack each of white lime to refresh the 'M' itself. The participants loved the drinking and harassment.

The highlight event had the twenty crossing a greased log over a mud pit of water that the other freshman dug the night before. The rest of us steered well clear by studying in the library or visiting the welcoming calm of the campus Christian coffeehouse.



Figure 27- Greased Log Pit (D.Lytle 1976)

The second event in October was more inclusive with an 1849 theme with beard growing contests, mock jails and casino, the annual parade in Socorro, the annual Conrad Hilton Golf Tournament (Socorro was the hometown for the hotel magnate), and drinking in period cowboy attire and hats. A few women in the 1970s sewed authentic slit-side dresses as 1849 bar room girls. Awards went to the most authentic detailed outfits.

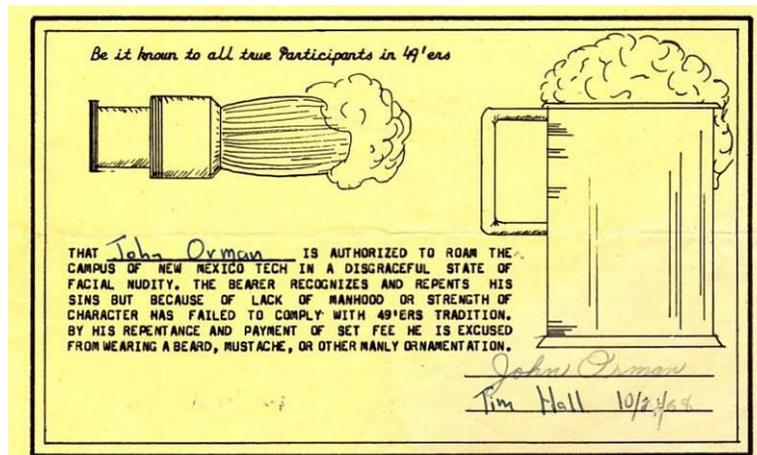


Figure 28 - Facial Nudity Permit (J.Orman 1968, died 2015)

Firearms

Gun club members carried old-west gun belts with live bullets, pistols, and rifles on campus during 49'ers. No one worried about student firearms and most of us relished the ambiance that they brought to the annual event. I presumed the weapons were unloaded with permits from the 49'ers committee, as there was no reason to believe otherwise.

In early 1970, there were shotguns and at least one ammunition loader machine in West Hall, and his door was nearly always wide open to get air circulation during the summer. This did not seem to be an issue with the dorm residents. It was not a secret and several gun hobbyists were active target shooters. There was a cowboy/49'er-miner feel to it, far from the ghetto image of street killers in today's movies. If there were problems, people knew who to call for help from West Hall. It infused a positive and relaxed mindset.



Figure 29- Casino money for 49'ers Day - 1973

As the evening events began, the drinkers headed for the mock Casino or the Ore House (a student-run bar beneath the girl's dormitory). The rest went home or ordered up exotic teas or strong espresso at the Mustard Seed Coffeehouse to study for exams.

New freshman who were never likely to join the party-hardy crowd gravitated towards the Coffeehouse. Christians on campus worked hard at not being spoilsports while evading the more overt hedonism. With a small campus, we saw each other daily in classes. An unspoken live-and-let-live policy between the extremes kept us sane.

Three Hikes to Colorado River

Upper level students, Robert Heid and Paul “PJ” Jansen, invited freshmen Mike Hambrick and I to join their annual backpack trip into the Grand Canyon. In the early 1970’s, we hiked and camped without needing a permit during the off-season.

We took the easiest trail to the Colorado River. The Bright Angel trail descends 3000 feet using 4.6 miles of switchbacks to the Indian Gardens campground on the mid-level plateau. It descends another 1400 feet for 4.7 more miles to the campground. This South rim 4000-foot descent is 8 miles. It then follows a riverside level path for 1.3 miles to the campground. The footbridge over the raging river has nervous see-through grating.

The weeklong Thanksgiving 1971 break was the best season to descend. The rim had a layer of snow but the river edge was a warm 80 degrees. The road trip to the Canyon introduced me to the Petrified Forest and the panoramic Painted Desert. Hiking in inch-deep snow down to the first rest house, we wore winter coats, flannel shirts, and long sturdy pants. On a branch hike, we peered into the deep river gorge from a cliff-edge lookout (at Plateau Point, 1.5 miles from Indian Gardens).



Figure 30- Bright Angel Trail 11/1971 and Mini-Waterfall 9/1972

We took off clothing layers, hanging our coats and shirts off the top posts of our aluminum backpack frames. At the sandy campground, Robert had us eat our heavy canned foods there. We thus packed up with light dry food for the ascent. It felt like hiking a mountain backwards with the difficult ascent ending the trip but with less weight. The same scenery felt significantly different when observed from below.

Enthused by our success, we packed more correctly in 9/1972. I finished my first sophomore quarter (summer) and this trip occurred just before the fall classes started.

Halfway down the inner canyon under a blazing afternoon sun, we waded barefoot in a shallow 3-foot wide stream. A tall thread-thin waterfall fed the stream with the flow of a home shower. We camped perhaps two nights. On our return hike, clouds threatened to rain. The nearby River Rest shelter thus became our impromptu camping spot on one of those nights. The next morning, we stopped again at the waterfall hiking back to the rim.



Figure 31 - Lower Canyon Stream and Imminent Rain - 9/1972
L-R: Robert Heid, Paul Jansen

Our third descent in Thanksgiving 1973 had a far different outcome. When we started from the rim later in the day than expected, we discovered a newly posted rule that required camping permits three months in advance. Having driven so far, we ignored it given that it was clearly the off-season and the trail devoid of hikers. To reach Phantom Ranch before dark, we could not gawk, rest, or delay our descent.

As expected, we found the sandy campground entirely deserted. In twilight, we set about to start making dinner. A park ranger came by before we set up our tents. He cited us for camping without a permit. He did not accept our attempts to seek a waiver and said we needed to appear before the judge at the Park Courtroom the next morning to pay our fine. He forbade camping overnight and ‘suggested’ we hike out by moonlight.

Already wearied by the double-timed hike down, we saw no option but to hike out to reach the Courtroom when it opened. We repacked, nibbled some trail-mix, and shouldered our still heavy packs. The hike upwards taxed our strength but the trail was easier under the peaceful full moon instead of the earlier glaring afternoon sun.

One foot plodded in front of the other when the final four miles of switchbacks arrived. The snow amplified the moonlight without resorting to flashlights. We discovered stamina beyond our physical limits and hiked silently preserving our strength. There was some risk as the only hikers that night, but ascending gave us more surety in the snow than potential slips in a descent. At the rim by 2am, we donned our warmest clothes to sleep awkwardly in the car. A low snowpack surrounded the parking lot.

Bedraggled by daylight, we washed up to look presentable and were at the Courtroom as the first penitents. We described our moonlight trek and affirmed that we indeed had not camped overnight. The judge dropped the charge with a stern warning. We drove back to Socorro glad for the lenient closure. Thereafter, I had to list this event for my security clearances as my sole encounter as a defendant. It was a life lesson learned by error.

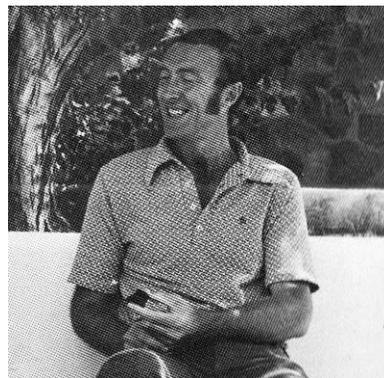
Employment

Campus Co-op Work Study

I dug out campus sewer trenches during my 1971 summer. It was not the promised job in my academic field, but I gained an appreciation for the trades. The carpenters next used us for campus construction. In wheelbarrows, we hand-mixed cement for sidewalks and a lime/cement mix for wall stucco. I hauled sheetrock, gravel, lumber, and sheetrock mud for six months under Carlis Jones' supervision. Thereafter, I frequently greeted my former workers whenever I saw them. It paid to have friends in Plant Engineering.

Scientific Analysis Programming

Terminal Effects Research Analysis (TERA) hired me as a freshman (January 1972-May 1973). Their testing range beyond the golf course evaluated military explosives with strong ties with the US Navy. With my freshman computer courses completed, Hank Giclas hired me to write FORTRAN routines for fragmentation patterns against steel "witness plates".



Hank Giclas (Yearbook 1976)

Dr. Paige Christiansen, a retired affable professor of history, wrote briefly about the TERA history on an old web page but that history has since been lost,

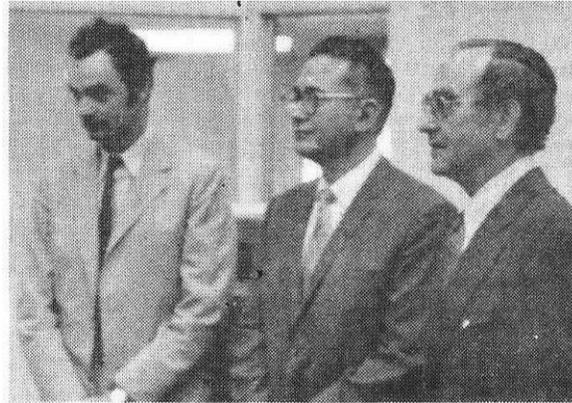
Kathy Hedges then wrote (edited from another old web page):

Dr. Workman was a physicist interested in atmospheric electricity. During WWII, he worked on weapons development. On assuming the presidency of the School of Mines in 1946, he brought with him a research group, which worked on weapons testing and analysis (the Terminal Effects Research and Analysis group, or TERA). With end of the Cold War, TERA became the Energetic Materials Research and Testing Center (www.emrtc.nmt.edu/) which uses its expertise in anti-terrorism, land mine detection, and safety testing of explosives.

As a junior, the college approved my application for an off-campus co-operative honors job even with a semester of incompletes. Naval Weapons Evaluation Facility (NWEF) in Albuquerque at Kirtland Air Force Base (described later) hired me based upon my prior 18 months with TERA. I wrote FORTRAN subroutines implementing equations.

My grades had nosedived from seeing little connection between study and real work. The NWEF job provided the crucial self-discipline for my degree. I started the job in June 1973 with four incomplete classes bordering upon failing each. I returned to finish that dead semester with four 'C's and two 'A's (dropping my GPA to 2.8). Thereafter, I earned 'A's and 'B's each semester. The simple routine of a 40-hour workweek radically recalibrated my handling the far easier classwork and laboratory exercises. After my wedding, I earned all 'A's with a spurious 'B' as a senior, thus rescuing my GPA.

I returned to TERA for six months programming FORTRAN routines for Monte Carlo simulations of naval fleet survivability. I had the higher mathematics by this time to appreciate the anticipated results. During off-hours, our TERA computer card decks competed for limited dedicated IBM-360/44 time with the astrophysics graduate students of Dr. Colgate and the Business Office (payroll, bookstore inventory, etc.).



DAVID RICE (middle) GEORGE COWAN (right) were acquainted with Tech campus yesterday on a tour guided by Dr. Stirling Colgate (left). The recently appointed regents were visiting Tech to attend the Board of Regents meeting

Figure 32 – Dr. Colgate (d.2013) in Computer Center (Defensor Chieftain 9/7/1972)

My second six-months with NWEF introduced me to the infancy of simulation graphics on the CDC-6600, which I tackled with enthusiasm. I wrote FORTRAN routines plotting survivability envelopes and nuclear burst effects upon heavy-lift helicopter blades. I thrived on the heady mission but it slowly drained my interest towards the end.

I wrote internal components for a large vital project but never got the satisfaction of completion. The subroutines needed constant adjustments based upon experimental data. The slow delivery cycle exceeded my tolerance and drive. I wanted to see faster results.

Campus Business Office

My career crystallized towards making better use of our computers rather than improving these still underutilized machines. Data management fulfilled my fundamental shift from pure computer science.

I joined the Tech Business Office in 1/1975. My supervisor Judith Rane and I worked with her early concepts of relational databases using flat files and a locally modified FORTRAN library designed for business functions. None of my classes taught this.

A graduate mining engineer and a believer worked there, Jennifer Nelson from Guiana. She later joined me unawares at LLL in Livermore. Jennifer joined the local board of Young Life clubs for high school students. I much later led AWANA clubs for high school.



Judith Rane (Yearbook 1976)

In 8/1975, I programmed the first computerized Tech Alumni Directory. I created the two-column pages for the Print Plant paste-ups. They had printed none since the late 1960s. Since our input/output devices handled only upper case text, this first edition (and through 1978) looked like all of our other upper-case output (invoices, report cards, class rosters, tax forms, etc.) Kimberly Eiland had newly hired on as Alumni Director (while a Junior) and thus the main keypuncher of all those addresses. They produced an elegant hardbound version, properly typeset in upper/lower case in 5/1979.

I saw students and staff often at a keypunch machine. By 1990, the same people used a PC as a work terminal. We treated the keypunch as just a tool, with no social strata stigma from earlier decades. Everyone needed to know how to use a typewriter and the keypunch machine. We felt some elite status since the Business Office could afford a keypunch machine in-house instead of sharing the few over at the Computer Center.

I presented my experience with Judith's relational data structures as part of my interview at LLL in 1976. Most programmers, certainly by 1990, expected a short code on each data record to reference a list of common terms. However, in my 1970s employments (including LLL), I frequently found data replicated throughout huge data files.

My design of the Alumni Directory listed all degree majors within a stand-alone file (today, called a reference table). Thus, our alumni records used a 2-digit code for each major where we packed as much data as possible onto each 80-column punched card. If the name of a major changed over time, we changed only a single punched card in the "Majors" file to affect that revised text across all Alumni records.

Naval Weapons Evaluation Facility

My first off-campus co-op work with the US Navy (6/73 to 12/73) forecast the research environment of my career. It was an aviation research group at Kirtland Air Force Base with nary a ship. We had one aircraft hangar and a single-story office T-shaped building.

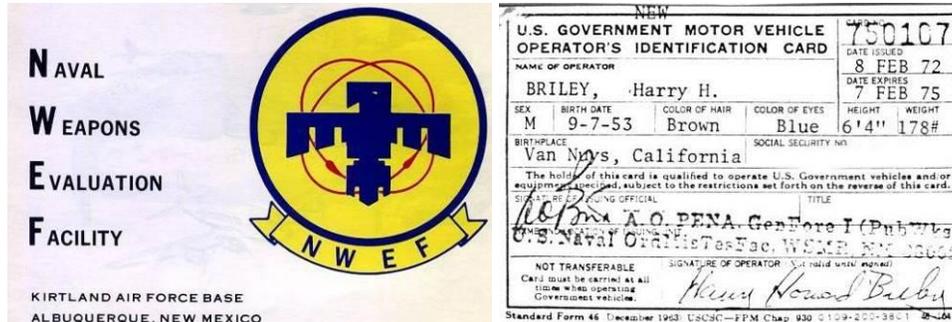


Figure 33 - NWEF Logo - Government License through TERA

The engineering group welcomed me with a luncheon and introduced Jalapeno peppers.

“How do you eat them?” I asked.

Virgil replied, “Oh, you just pop them in your mouth like candy.”

They had a huge guffaw while I desperately tried to put out the fire. I was a “gringo” from then on and always kept a glass of milk at the ready for New Mexican dishes.

Robert Norris wrote in *Bulletin of the Atomic Scientists*, 9/1/1993:

After 44 years of operation, the Naval Weapons Evaluation Facility (NWEF) at Kirtland Air Force Base in Albuquerque, New Mexico, closed its doors in April. According to the Navy's History of NWEF (1948-1993), it was "the first nuclear-weapons-related facility in the Free World to be shut down."

NWEF was always an odd naval base: with the nearest ocean 900 miles away, the base was dubbed the "Rio Grande Navy." It was the Navy's primary non-strategic nuclear weapons research, support, and monitoring organization. The Navy established it [originally] as the Naval Air Special Weapons Facility to keep an eye on the [civil service] Atomic Energy Commission and US Air Force activities at Los Alamos, and to provide naval aircraft with nuclear weapons capability.

www.highbeam.com/doc/1G1-13257447.html (Edited from introduction)

NWEF hired me as a Civil Service GS-3 at \$6128/year with an October adjustment to \$6408. For my second stint in 1974, they hired me as a GS-4 at \$7198/year and adjusted in October ending at \$7596. This averaged \$3.60/hour. Tech paid me \$1.90/hour as one of the higher paid undergraduates. For comparison, my salary at LLL upon graduation in 1976 was \$10,000/year ... a head-spinning wealthy \$5/hour to a poor college graduate.

As a simple courier, I made twice-daily bus trips to the Air Force Weapons Lab (AFWL) to submit heavy punched card trays and pick up prior output. I then tabulated our total usage of their CDC-6600. This shuttle activity took an hour and a half daily.

Most of my time, I programmed using FORTRAN and BASIC on four computers:

- HP9820A programmable desktop computer and plotter
- Burroughs-5500 time-sharing system at Sandia Labs
- PDP-10 time-sharing system (on a remote node tied to Sandia Labs)
- CDC-6600 (a still sophisticated computer in 1973) at AFWL

My job appraisals showed that I lived on ‘student time’. Early mornings and I did not mesh. These two six-month stints re-oriented me to an adult schedule. I was grateful the Navy took a risk based upon my TERA work since I had no idea of my career path.

Peter Hughes noted my June-December 1973 work:

Harry did an outstanding job and his work was quite valuable to several urgent projects. He assisted me with coding for:

- ** Antisubmarine warfare systems analysis*
- ** Analysis of blast effects on the heavy-lift helicopter rotor system*
- ** Data plots to microfilm*
- ** 16mm movies of nuclear detonation effects upon an in-flight helicopter*

Harry attended "Time-Sharing Techniques" at Sandia during lunch hours. He became our expert on the PDP-10 and taught a five-hour course for 10 engineers. Extremely adaptable and quick to change between projects. Takes instruction very well. Completed assignments with minimum instruction. Willingly worked after-hours and weekends [partly due to my morning tardiness]

Peter Hughes noted my June-December 1974 work:

Harry did a very good job, was much more punctual to work, and coded for:

- ** 16mm movies of reentry vehicle heat shield erosion (in 3D color)*
- ** Simulation of underwater shock wave for Submarine Launched Cruise Missile*
- ** Curve fitting to nuclear effects data*
- ** Calculation of air shock hydrodynamic enhancement for gamma ray transport through a non-homogeneous atmosphere (very complex high-level programming)*
- ** Studying Anti-Submarine Warfare*

Diligent worker who concentrates on primary task without getting on tangents. Versatile and quickly adapts to new priorities. He was well-organized and documented work for follow-on students.

Of the 24 measures for a GS-4 student, Peter Hughes tagged six as outstanding for me: conservation of time, cooperation with supervisors, willingness to learn, effectiveness in organizing, neatness/presentation/acceptability of work, and promptness of action. The majority of the remaining student traits were marked highly satisfactory.

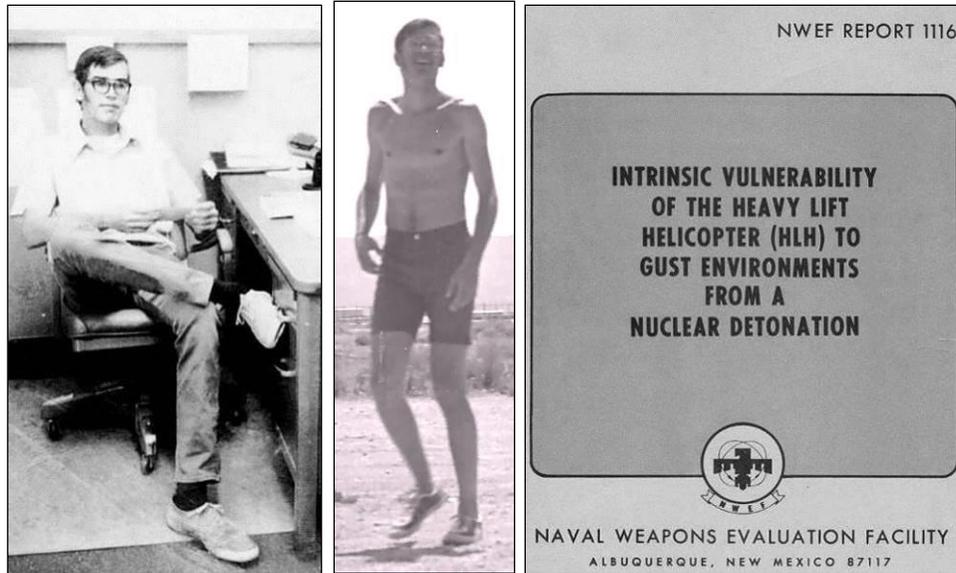


Figure 34 - Office 10/1973, Volleyball 8/1974, Report 12/1974

Left: I wore black rimmed glasses mended with Scotch tape on the nose. One of my deck shoes soles separated at the toe. At age 20, I was a certified geek.

Middle: It was impractical to go off base for lunch and the Kirtland Cafeteria catered to the military. Therefore, we brought sack lunches and played volleyball.

Right: I programmed computer-generated plots from experimental burst data for a survivability analysis report for Peter Hughes and Rudy Friedberg.

In 2013, the 50-year-old Chinook-47 Helicopter still ruled the whop-whop-whop world of heavy transport. These first appeared in the 1962. Boeing built 1200 at \$35 million each. One rarely sees this twin rotor helicopter except near a military base. The proposed HLH version that I helped analyze during 1974 never went into production.

From: en.wikipedia.org/wiki/Boeing_CH-47_Chinook (Edited):

In 1973, the Army contracted Boeing to design a "Heavy Lift Helicopter" (HLH), designated XCH-62A. It appeared as a scaled-up CH-47 without a conventional body, similar to the S-64 Skycrane, but the project was canceled in 1975. The program restarted test flights in the 1980s but again not funded. The Army scrapped the [sole] scaled-up model in 2005.

Right next to the electrically noisy keypunch machine, the team created an open room of copper wire mesh (a faraday cage) to conduct interference-free electrical impulse tests.

There were several semi-trailers bearing the Lawrence Livermore Laboratory (LLL) insignia near our Navy buildings. I knew nothing about LLL back then ... or that in two more years I would be working there.

NWEF Advance Technology Colleagues

This page of names is for future historians. My colleagues shared offices and some believed in Jesus, albeit not openly until I wore my college-era “Jesus” buttons. Commander Strunk mostly interacted with aviation staff. One young professional who wore a tie daily (despite hazing) inspired me to wear a tie for 37 years (despite hazing).

Paired two to an office in the south hallway (moving south to north) were:

East Offices	West Offices
James Horwelldell Jack Abbott	Ray Tillery Craig Oswald
PDP-10 Room	Virgil Stanley – Introduced me to jalapenos Gerald Hash – Volleyball powerhouse
Jim Campbell Lee Chavez	Fred Kopstoch
Doug Rigdon - Christian Church Peter Hughes – My supervisor, I housesat for him one week	Larry Oliver , Manager - Nazarene Church, I played bass in “ <i>It’s Cool in the Furnace</i> ” there and backpacked in Pecos wilderness.
Rudy Friedberg , Catholic from Poland – I ran plots/video for him Harry Briley , Campus Christian	Classified Vault Room
Marvanell Brown Elena Franklin	Administrative File Room
Ken Hickerson	Thelma Monroe, Secretary - Christian Church Ruth B Hurley, Secretary, Employment papers
Hallway to Keypunch Machine	Front Doors and Reception Lobby
Commander David Strunk	

Mary Fran Schlather, Art Schroeder, and Bill Thompson were listed but unknown to me.

Advanced Technology Department (Code AT) Mission Statement

1. *Conduct feasibility studies on new concepts and design criteria for future nuclear weapons; prepare military characteristics and stockpile-to-target sequences for new weapon systems; and participate in phase I and II studies.*
2. *Participate in nuclear weapons effects test and protective equipment tests. Conduct the Navy's vulnerability program for nuclear weapons; perform nuclear vulnerability analyses for weapon systems; serve as center for nuclear weapon and system vulnerability programs and problems; and recommend modification to nuclear weapons and systems for operational capability.*
3. *Conduct general theoretical studies and analyses in support and extension of the facility mission. Maintain liaison with the AEC [Atomic Energy Commission], its [civilian] laboratories, and other activities for nuclear devices and systems. Assist the Naval Ordnance Laboratory, White Oak in nuclear vulnerability; and maintain cognizance of the nuclear vulnerability projects and facilities of other agencies in the Albuquerque area.*

Spiritual Explosion

Jesus on Campus

I was the good kid who needed Jesus, graduated high school in June 1971 in Southern California, and followed the cusp of the Jesus Music wave from 1970 to the early 1980s.

A young Marsha Stevens of “Children of the Day” (1971) had just come out with the song “*Come to the Water*”. My dad was against organized religion and forbid me to attend any church. Singing those new songs on my high school campus with other believing students was a godsend. In college, I attended Explo’72, a significant Christian weeklong Stadium event (described later). My father disowned me over that choice.

After 2010, I began importing favorite vinyl albums to my computer. These included the “*Love Song*” (1972) and “*Final Touch*” (1974) albums by “LoveSong”. LoveSong, as new Christians, performed at Explo’72. I admired these innovative faithful groups for following Jesus full up and not singing for the fame. It glowed from their recordings.

Freshly listening to these 40-year-old vinyl LPs, scratches and all, was immensely satisfying. The music of the Jesus Revolution paralleled our personal faith with Jesus during college. The bold faith-focused messages helped frame our early Christian walk. We nearly wore out those vinyl LPs through frequent playing.

Of the 870 students, only 57 at the time (under 7%) openly identified themselves as Christians. We quickly learned to be adept at Christian apologetics; else, anti-Jesus professors and fellow students would verbally eat us alive. We called it the “Seminary of Hard Knocks” and most of us science students who dared to be labeled as Christians, went on to become active lay people at Weapons Laboratories, Sunday School teachers, AWANA leaders, Christian school principals/teachers, and a few pastors.

Chuck Girard on Speaking in Tongues

Chuck Girard, singer/composer with LoveSong, wrote part of his faith story upon the 25th anniversary of the “*LoveSong*” album. Chuck wrote of pushiness and quietness. My own experience in 1970 matched Chuck’s for speaking in tongues and his unawareness of the furor over it among churches. We both identified with its gentle quietness and peace.

Chuck Girard wrote in 3/1997 (edited):

“*And The Wind Was Low*” was my personal favorite LoveSong tune. The music was written pre-Christian in the Laguna [Beach] house. The original title was “And a Child Was Born”, and it was about Jesus. Even though I was not a born again yet, I fancied myself a Christian, and wrote lyrics about Jesus. The lyric never got finished, but I could not get the melody out of my mind.

After I got born again, I got into the image of the Holy Spirit being the wind. [Both Pneuma in Greek and Ruach in Hebrew, translated as Spirit, mean breath or wind.] The Beatles had a song called “*Because*” on the album “*Abbey Road*” that had a line in it “because the wind is high, it blows my mind”. I always liked the

image of the wind, so I thought, "When the Holy Spirit moves, it's like the wind comes down to our level and blows on us". I twisted the idea around and made the wind low instead of high.

My idea was the two types of baptism. God first brought me to the waters of baptism, and then later brought me to the baptism of fire in the Holy Ghost. For me this was a distinct [launch-pad] experience. Lonnie Frisbee, a hippie preacher from Calvary Chapel [of Costa Mesa], brought me over to his house one day about a week after I was born again. I did not know it, but it was his intent to pray for me to receive the baptism with the Holy Spirit.

He first prepped me for what he was going to pray for, but when he told me I should speak in tongues, I stopped him right there. I explained that I used to get stoned in Laguna and [would] start to speak in strange languages. It always brought fear and I would quickly stop. Even then, I perceived I was calling some sort of evil spirit, which is in fact what I was doing. Therefore, I had this negative attitude toward the tongues thing, without even knowing that this was a point of existing controversy in the church.

He reassured me that this was of God and it would be different from my previous [drug-induced] experiences, and sure enough, it was. I immediately could sense the difference and that I was in contact with God. I began to sing out in tongues, and wept as I felt so cleansed and empowered. I felt a profound sense of God's forgiveness and acceptance. I had never felt so clean in my life. I never even heard that this was controversial in the church until later. The last [two] verses of this [ballad] illustrate my exact experience.

*And the wind grew still
And he touched me with the power
Then came the fire, the strong desire
To really serve Him*

*And the tears were joy
And He listened as I sang to Him
I bowed my head, He gently said
I was forgiven*

©1971 Dunamis Music

www.one-way.org/lovesong/chuksong.htm



Chuck Girard (Album Cover)

Time Magazine produced an iconic cover the second Sunday of my arrival on campus. An older student discarded it and this cash-strapped student snapped up that copy. The article covered multiple denominations and key hot-spot cities, missing New Mexico.

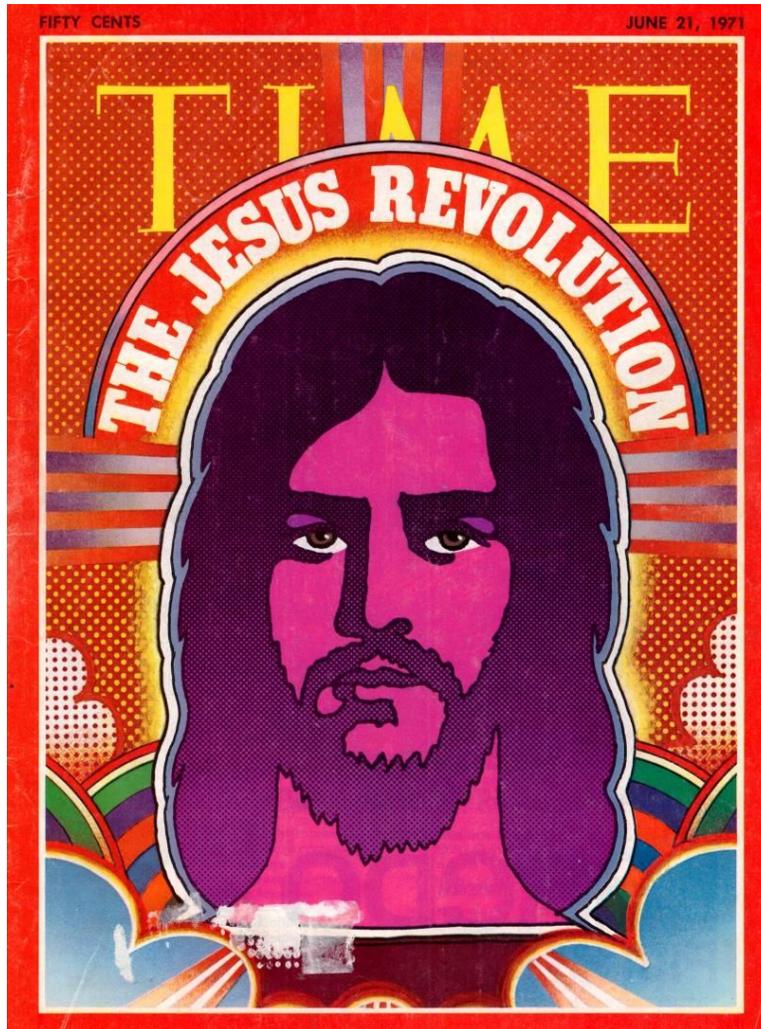


Figure 35 - Jesus Revolution (Time Magazine, 6/21/1971)

Larry Eskridge wrote a significant history in “*God’s Forever Family*” (2013, re-issued 2018). He argued the Jesus People Movement peaked in 1971 with that Time article. He wrote that real Jesus People (former hippies and drug users) fit within 1965 to 1971. He labeled follow-on youth after 1970 as Jesus Kids with mostly church backgrounds. Since many students rebelled with drug use and alternate worldviews, we considered the Jesus Movement quite vibrant, if perhaps delayed, throughout New Mexico during the 1970’s.

This faith wave swept beyond our shores. About 1973, a student at Tech named Brother Saale’ came from Nigeria. His polygamist father became a believer in Jesus. Wanting to honor one-man-one-woman marriage, he released his other wives with financial support and kept Brother’s mother. Since Brother followed Jesus, we called him Brother Brother.

Age 17 - Socorro Christian Church

The first Sunday at college, 6/14/1971, I closed my eyes and picked a church at random from the phonebook yellow pages from a deep desire to use my new freedom for God. Although it appears as my first action of rebellion, it was not really a rebellious act against my father, but an experiment in campus independence. I do not recommend this as a valid means for choosing a church. God, however, was in on the game.

Since Christ Jesus paved the way financially to Tech, I committed myself to his service and began attending church services for the first time. I was significantly free-lance in my theology but gladly submitted to a local body.

I wrote in the MSCH Newsletter, 9/1981, Vol.2 (edited):

I remember my prayer before leaving High School that I would meet at least one believer at Tech [as a prayer partner]. The Lord provided a whole community!

On my third week there, the church asked me to preach every other Sunday my first year. Robert Heid, two years older, preached previously and continued on alternate Sundays. This arrangement was mutually beneficial given our heavy academic course load.

Robert wrote for the (Catholic) Weekend of Christian Challenge in 11/1975:

Praise God, it is wonderful to have Jesus Christ as my Lord! The Lord placed me in favorable circumstances in a Christian family. At an early age, I came to realize that His expectations for me were much higher than my performance. He loved me, and showed me that if I would just repent He would forgive my sins.

However, [even] as a Christian, I went through high school and college missing a lot of God's blessing. There was more that Jesus wanted to give me. In addition to forgiving my sins, He had things for me to do with good times to enjoy.

Through the help and testimony of Christians [at Tech], I began to find out what Jesus can really do. When he filled me with the Holy Spirit, He gave power for happy living, miracles, healing, and answered prayer. I saw my life turn around as Jesus began to replace my selfishness with love.

In the four years [since 1971], it has not been one straight success story for me, but it has been a straight success story for Jesus. He gave me power to stand against sin (and forgiven me when I did not). He helped me to share love for others. He has let me be his partner in miracles of healing and changed lives. It is good to live for Jesus.



Robert Heid – 9/1972

I knew nothing about children’s Bible stories (Samson, Daniel, et al) or church hymns. Thus, I had no baggage to unlearn, but I had so much to learn quickly. I had not even finished reading the Bible. What I had read so far was significantly personal and this intimacy with Jesus came across in my preaching. The older women improved my pulpit skills with kind frankness. Being soft-spoken, I got catcalls from the first row of “*Speak up Harry!*” A boost in speaking volume brought approving nods all around.

One Sunday, the oldest woman invited the students (Robert, I, and two others) for lunch. She wanted to show off her African Violets. Visiting an elderly woman to look at flowers seemed overly boring. I was a clueless freshman, but a free lunch sweetened the deal. I learned much later that African Violets were difficult to grow, much less in New Mexico. After lunch, she surprised us by recommending (prodding?) us to sing some hymns while she played an old upright piano. It was in the home of this elderly saint that I first learned to sing “*The Old Rugged Cross*”. I never heard that hymn before and fell in love with the richness of church hymns in the spiritual life thereafter.

The Socorro congregation willingly asked us two students to preach for them: myself as an unattached spirit-baptized believer, and my co-preacher Robert of the Church of Christ (a sister denomination that likewise denied it was a denomination and equally hostile to Pentecostal theology). The irony of our opposing backgrounds was not lost upon the congregation. They were glad to have anyone preaching the unadorned Bible in Socorro.

Jesus Papers

I subscribed to a monthly Jesus Paper called “*New Life*” from Thousand Oaks. It had faith stories from young believers, ads mostly for California events, and a list of Christian coffeehouses in southern California. Thousand Oaks was near my Simi Valley home. We ordered a hundred per month as a free handout at the MSCH. I clipped headers from articles, colored them, and posted them facing outward in my dormitory window.

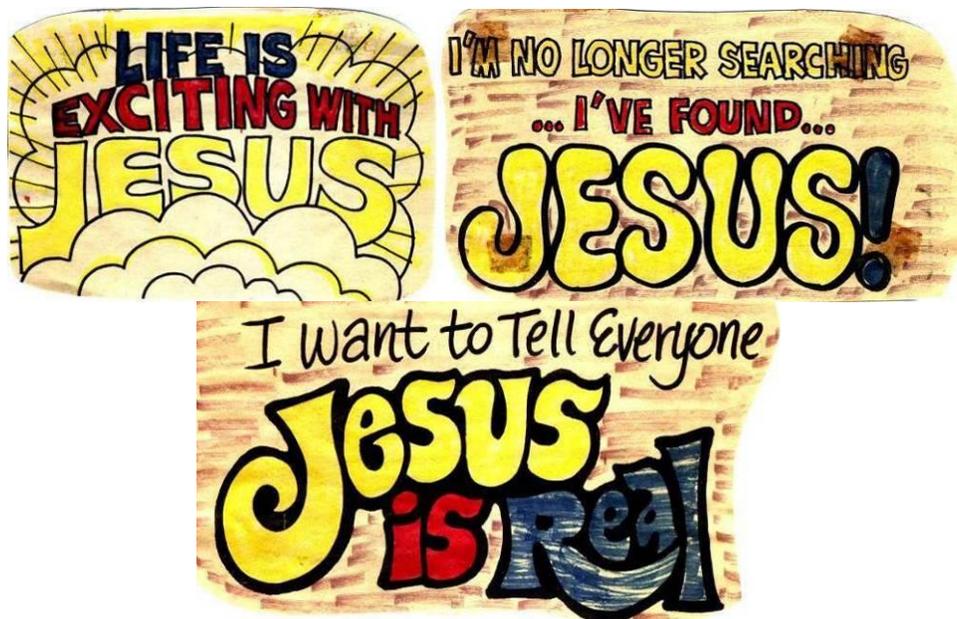


Figure 36 - Jesus Art for Dorm Window (New Life 1971-1972)

Steve Bathaurer, a Christian friend during high school, sent me sample copies in 2017 of “*New Life*” papers from his archival boxes. Usually always done with newsprint black ink, this edition issued during Easter month in 1973 used brown ink.

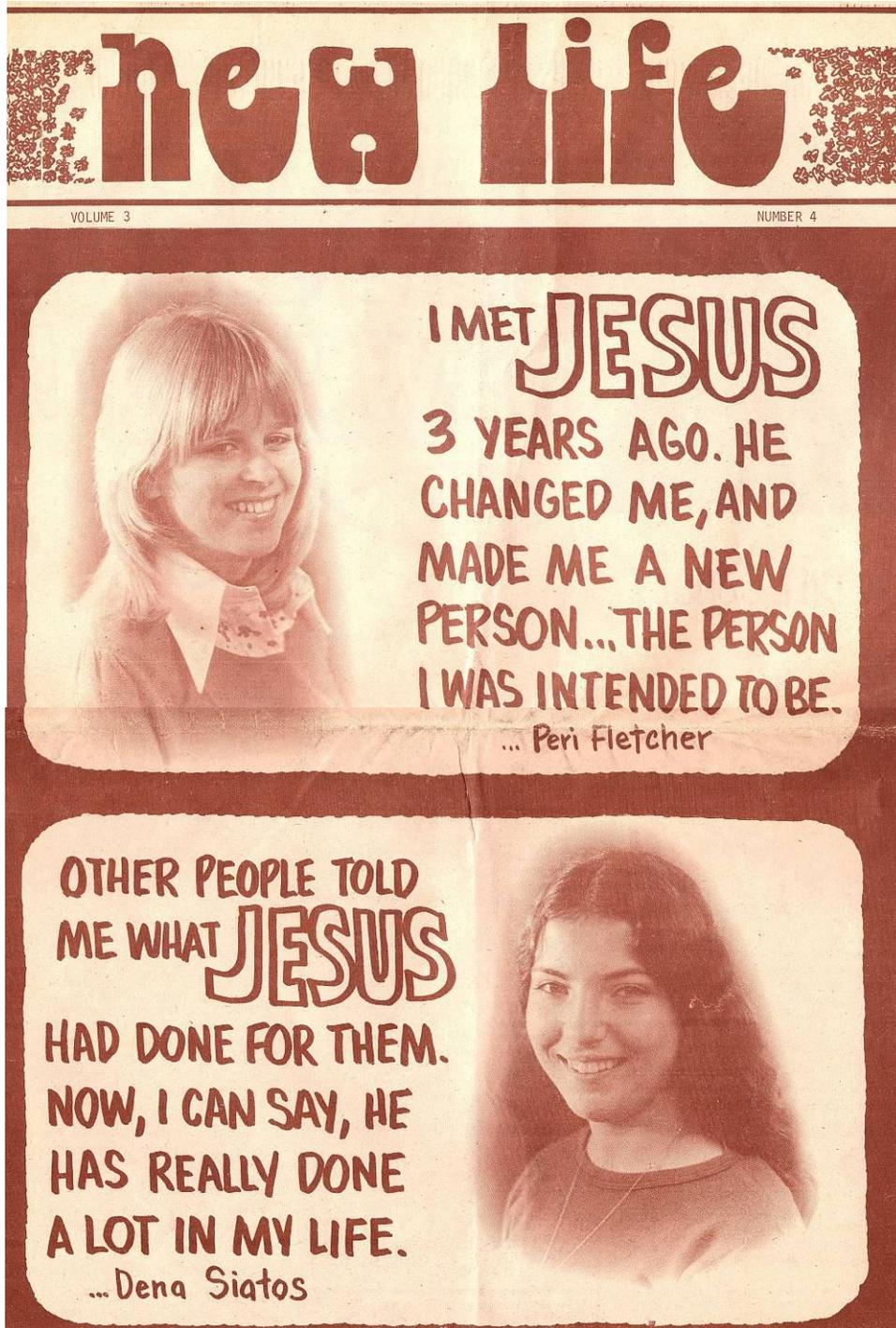


Figure 37 - Sample Jesus Paper (New Life Vol.3 No.4, 4/1973)

Growing into Adult Leadership

At age 18, I was well along the adult track of paying my own way and taking on adult responsibilities in the churches. Emotionally, I fled from Simi due to the estrangement with my father; the further distant meant the better. I sorely needed to be on my own.

My parents drove out their Vista Cruiser station wagon with my bulky string bass in 9/1971, which impressed me significantly. Even so, I walked on eggshells.

They did this sacrificial act of service and I did not even know how to communicate with my father. I gave a tour of the campus and talked about college life, while staying far away from the verbal minefields. I have no idea whose cat appears in the photo below.



Figure 38 - Parents visited Campus – 9/1971

I made one solitary entry in my diary after arriving at Tech (edited):

12/18/1971 - It is the end of the fall semester and I am going back home [for Christmas in Simi Valley] on Tuesday. Lord, make it spiritually profitable. [I have no memory how I travelled without a car or what happened on that visit.]

Right at the beginning of summer, you let me preach [bi-weekly] before the congregation [of Socorro Christian Church]. Thank You! Now Robert Heid, the student pastor before I came, and I are wondering how you plan to work with Socorro Christian. You have blessed our ministries a lot, but not much got through to that church. Have I been listening to your Spirit completely?

Procrastination, in letter writing and everything else, is a problem. I need you to pull me out of this rut. Are you waiting for me [to act]?

As far as the supernatural, you have given me a taste of healings, tongues [for public interpretation] in the congregation, and a bit of prophetic speaking [not to be confused with fortune telling nor normal preaching]. I know that you are quite real, but it has taken faith (belief and trust) to obey your Spirit. Moreover, because faith itself is a [charisma] gift, there is proof of your work first-hand.

My friends here at Tech are receiving Christ and the Baptism into your Holy Spirit, and it is all about you. For the high school ministry [in Socorro], you are working surprisingly fast. Yet it seems as if I am just an observer, but the spring semester has a free morning to visit the high school [regularly, but did not occur]. I realize now that my two semesters of observing were [useful], even at Tech.

Here I am for training by you (and I am). Yet, I have done nothing except paltry little things to further your Word. Perhaps I am at fault (I know that I am). I have a desire to work more completely with you. St. Paul Methodist Church is moving in your Spirit in a marvelous way. I am going to see Charlie Williams, its pastor, to deliver sample Hollywood Free Papers for him to examine.

After reading the 4/1972 edition of my high school Class of 1971 Alumni newsletter, I wrote about the spiritual temper and my freshman coursework at Tech.

I wrote in the Royal High School Alumni newsletter 6/1972 (edited):

Praise the Lord! I am sweating out the upcoming finals. I am programming in ALGOL, PL1, FORTRAN, so I am learning, MAYBE! Recently, the [campus] Christian group went to Portales [New Mexico in 3/1972] for a Lay Witness Mission (LWM). The group is growing spiritually and finding the power of God (including me). It is fantastic the way the Lord God works! On campus, students cannot understand why we do not go along with their drinking, drugs, sex, and whatever else. Students that have received Jesus Christ as their personal Savior now look back at their life before Christ and cannot understand why anyone would want to go with the crowd in the first place!

Can anyone [update me about] Teen Hope? We are considering starting one in Socorro. The possibility for spreading the news of Jesus Christ to the high school community stemmed from going to the jail to talk with inmates (many juveniles). My school work: Chemistry, Calculus, Computer Science, and Geology takes up my time. Say "Hello" to Mr. Patterson, Mrs. Dorsey, and my old teachers.

While I still preached every other Sunday morning at Socorro Christian, I attended the evening service at the Assembly of God (AOG). That summer, the AOG pastor strongly encouraged me to choose a church and "land". I agreed, but chose instead St. Paul's United Methodist Church next to the campus. The motivation came from three factors:

- 1) Socorro Christian just called a full-time pastor (soon ending our year of service).
- 2) St. Paul's, under Charles Williams, was attracting the Jesus Kids from campus.
- 3) The freshman class for that 1972 summer semester included many Christians.

Full-Time Pastor Arrives

The newly called pastor for Socorro Christian wrote to probe about the congregation and our pulpit roles. Edward Weckerly was pleased with my writing as “submitted to a local body”. He treated me as a novice peer but still as a legitimate peer in common ministry.

He agreed with my observation that the Christian Church (the denomination from the Stone-Campbell Restoration Movement of the Second Great Awakening) denied that it was a denomination. After all, if the Christian Church (the denomination) was the one true church of the New Testament, then therefore no other versions logically existed!

The new pastor was well pleased to hear that Robert and I called people to Jesus (doctrine) and not to rules (dogma). It made his pulpit transition significantly easier.

He knew about church polarization and shared his list of 69 questions where the Christian Church did not agree. Each item fractured a congregation within that denomination. No item dealt with Bible doctrine. Instead, each split dealt with an extrapolated biblical application (or absence thereof). The rules in a local church came to the point of pronouncing others within the same denomination (or same congregation) as heretical.

Some of the items on his long laundry list were:

- *Use of Instrumental (or not) music in church* [due to silence of New Testament and since modern instruments not used until the Middle Ages]
- *Use of an organ in the church (versus a piano)* [due to the water-powered pipe organ used for pagan gladiator games]
- *Men wearing baggy basketball shorts (even while playing basketball)* [perhaps due to looking like a skirt or immodest exposure upon falling]
- *Women wearing pantsuits (much less wearing women’s cowboy jeans)* [due to a misuse of Deuteronomy 22:5 to not wear men’s clothing/armor]
- *The color of the new carpet in the sanctuary* [Your guess is as good as mine!]

KTEK Radio

Part of my expression of faith included the campus radio station KTEK, as the disc jockey for both a weekly Christian folk-rock show and a Sunday classical music show. I scoured each friend’s vinyl LP collections to get the latest Jesus People music on the air. Our signal broadcast to only the campus itself from the third floor of South Hall.

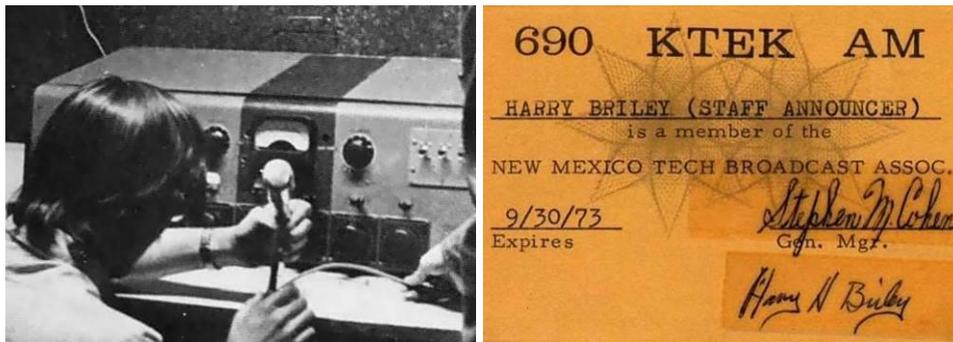


Figure 39 – KTEK (Yearbook 1971) – Member Card 1972-1973

Explo'72 – 6/1972

In my second summer, Ken Hill a friend from Royal High School enrolled at Tech. They awarded him a co-op work-study scholarship in 1972 apparently without his knowledge and he gladly accepted. He said that he first heard about the award in the newspaper!

Ken Hill recalled in 2/2014 (edited):

You were critical to my coming to New Mexico Tech. Your recommendation and presence there encouraged me to make it my first choice. The Explo '72 trip and my time at Tech were some of my most formative experiences.

Classes were not my focus, as I got more involved in the fire department and emergency services. I lived at the [Socorro] firehouse. I returned to California to get emergency medical training because of my [great] experience at the firehouse. Instead, I ended up getting into electronics and software work. However, my time in New Mexico set up an enduring love for that land and culture.



Ken Hill – 6/1972

Ken told me about a June 12-17 international student event at the Dallas Cotton Bowl stadium. Campus Crusade for Christ (renamed as CRU in 2014) sponsored the event of 80,000 delegates from all 50 states and 100 nations. About 35,000 high school students attended. The Saturday “Jesus Music Festival” drew 180,000 people to an outdoor park.

Ken planned to drive four of us there in his small red car. Robert Meade pre-registered but three days before the event on 6/9/1972, authorized me to take his place writing, “*The Lord wants him there rather than me. Praise the Lord!*” I felt deeply honored. Mary Ann French (Cheney) and Linda Loulan (Simmons) pre-registered resulting in the four of us attending from Tech. Ken and I stayed with his aunt or grandmother in Fort Worth.

This set up a crisis when I called home for permission. I was age 18, but the majority age was still 21 to most people. I was unaware that California changed it earlier that year to age 18. I had some trepidation asking about travel to Texas, but expected approval. My request triggered an unknown lingering hatred that my father had against the Campus Crusade founder Bill Bright. If I decided to go, it meant I would be disowned (“*You are no son of mine.*”) After a stunned goodbye, I hung up much disoriented. My father indeed disowned me and never spoke a friendly word to me for the rest of his life.

Taking stock, I decided to sever taxable ties that month, claim financial independence, and become a resident of New Mexico. I was working through software programming for TERA. Since college financial aid programs still considered me a minor, I filled out college forms to declare financial emancipation and citizenship in New Mexico.

We drove the 660 miles overnight leaving Socorro on 6/10/1972 and arrived the afternoon of 6/11 to check-in (probably 20 hours with needed breaks and meals). I soon understood the ditty, “*The sun is ris, the sun is set, and here we is, in Texas yet*”. The sunset and overnight lightening put on a great show on the horizon of the Texas plains.

We sang all the songs that we could remember to keep awake during the night. The “One Way” hand signal was the main means of silent daytime identification on the highway. Almost every California vehicle responded. Texas vehicles did not respond. Ken met a Teen Challenge bus at one of our several stops. He gave them some money even though they had not registered but were going to Explo’72 on faith.

Most college-age seminars revolved around witnessing and basic theology. I took copious notes. A panel debate in one side tent introduced the leading ministries for speaking with Jewish people. Moshe’ Rosen, who recently left a traditional organization, offered the most radical and motivating methods. He had just started “Jews for Jesus” in San Francisco, which I have financially supported monthly since at least 1978.

In the vendor/agency tent, I collected materials on various mission-sending agencies. I filled out an application packet for a Christian agency job matching service called InterCristo. They matched my interests to current openings with Wycliffe Bible Translators (specifically to a backcountry village in Vietnam), Slavic Gospel Association, and a few others. With the imminent loss in Vietnam, the threat of missionaries left behind communist lines did not appeal to me. Yet, this InterCristo database introduced me to mission agencies that I began supporting monthly after college without regret.

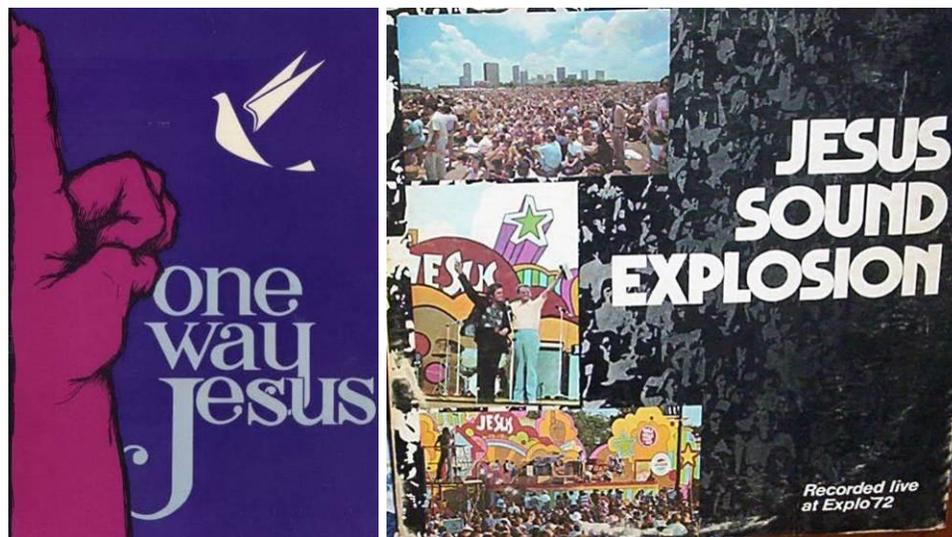


Figure 40 - One Way Jesus (American Bible Society) - Explo72 (CRU)

The daily concerts in the Cotton Bowl and the all-day Saturday “Jesus Music Festival” included a cross section of Jesus Music Bands: Johnny Cash, Andrew Crouch and the Disciples, LoveSong, Randy Matthews, Larry Norman, Danny Lee and the Children of Truth. Campus Crusade sponsored several talented groups of their own: Armageddon Experience, Great Commission Company, and the Forerunners. Billy Graham, Josh

McDowell, and Bill Bright each spoke. I did not attend every daily concert because of the numerous seminars held concurrently alongside the stadium. We did not attend the Saturday Festival because we had to be back early Sunday night for Monday classes.

Cathy Steere, staff writer for Campus Crusade (CRU) wrote:

Offering an explanation of the remarkable enthusiasm and spirit of unity that prevailed each evening, Explo delegate Reubin Askew, Governor of Florida stated, "What stands out the most when I see this group of young people in the Cotton Bowl with long hair and short hair, black, white, yellow – is that they have found a common bond in Christ. They accept each other for what they are – God's children." [I would have dubiously treated his observation as gratuitous politics had I not observed the civility and affinity firsthand. Anyone who wore a delegate wristband was marked as a trusted friend. Witnessing forays into the city parks saw the same kindness extended to/from police and local citizens alike.]

Officials of Fair Park, which houses the Cotton Bowl, told Billy Graham that the Explo delegates comprised the best-behaved crowd in the history of the stadium. Whereas huge amounts of trash are usually left behind after gathering of this size, literally only two pieces of debris were found when the huge Bowl emptied after the first meeting. [It helped that the closing speaker each night specifically asked that we pick up after ourselves. Remarkably, we 80,000 students accepted the challenge.] - Worldwide Impact, 7/1972, v3 n3, page 3

Bob Sherwood, a friend at work, told me in 2015 that he had flown to Explo'72 as a PhD candidate in his college contingent from Sacramento. His observations matched mine.

Tech Faculty and Faith

In 1971 to 1972, Pastor Charlie Williams at St. Paul's UMC in response to Explo'72 made wooden crosses on leather shoelaces, which we students wore on campus. The Dean of Men, Fredrick Kuellmer, accosted three of us outside Brown Hall ranting about how the Methodist church was "taking over" the campus. We looked perplexed at each other, as not one of us was Methodist, leaving him flustered. One was Catholic (Claudio?), I was still preaching at Socorro Christian in early 1972, and the third was Lutheran (Ken Hill). The Dean stomped off muttering something not at all flattering.

One English teacher behaved in the same aggressive way towards me publically in Comparative Civilization for holding a Christian worldview as in the 2013 film "*God is not Dead*". Anne's professor in Speech blew up in class after her speech about lack of fossil evidence for evolution. 'Intimidating' is an understatement. The science courses were civil but a few hostile liberal arts professors aimed for bear as in that 2013 film.

I had a personal mentoring meeting with Dr. David Shortess (b.1930, Tech 1966-1991) in his office as the head of the Biology Department. He could speak frankly and recounted that his post-doctoral and ongoing genetic research on corn cells strongly influenced his faith. His own observations of the supposed simple cells of the plant world ran counter to

what he learned about evolution his entire life. He could not run from his research data. He had to either reject the genetic data or reconsider his macro-evolutionary premises.

Robert Kirby in 2014 recalled something similar:

I had one-to-one mentoring with Dr. Clifford Keizer [Chemistry Department head, died 1998] who had originally worked on the Manhattan Project with Enrico Fermi up in Chicago with the first atomic pile. He taught my Physical Chemistry class. I discovered that his parents were Dutch missionaries in the Dutch East Indies. Dr. Keizer was all business about coursework but since he knew I was involved with the MSCH, he sometimes would share personal tidbits of his life of faith with me. [He was active in the Socorro Presbyterian Church.]

Other faculty encouraged Christian students. Dr. Geraldo Gross (1923-2019, hydrology) and his wife, Dr. Ruth Gross (languages) came from Argentina. They hosted Bible Studies for students in their home on faculty hill. They each were always and only “Dr. Gross” to me. They lived in their Socorro home at least through 2014. I waited until my junior year for the Spanish language requirement with gentle Dr. Ruth Gross. The Gold Pan Alumni Magazine (Summer 2019, page 13) claimed she “for decades constituted a one-woman language department, teaching German, Spanish, and French”.

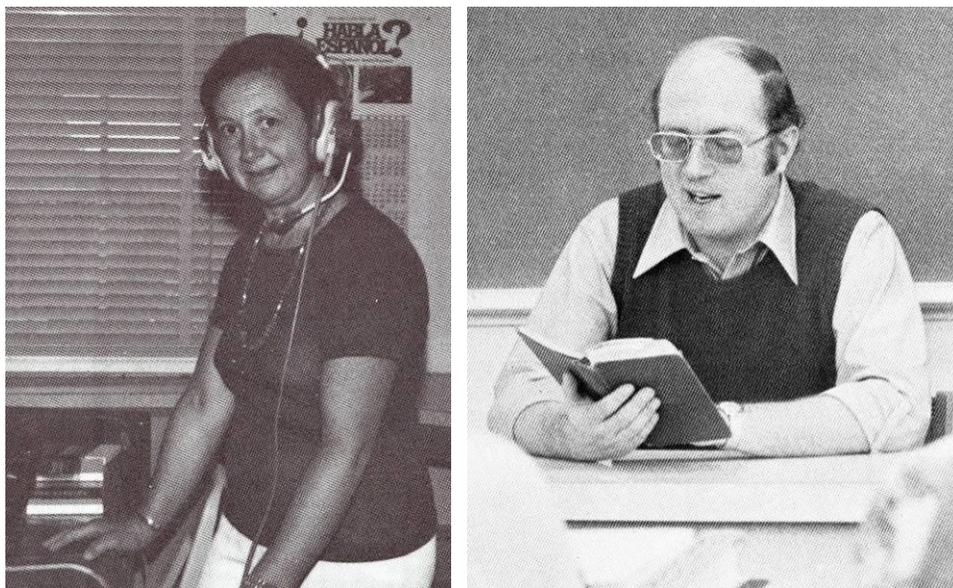


Figure 41 - Dr. Ruth Gross and Dr. Dean Loganbill (Yearbook 1976)

English professor, Dr. Dean Loganbill, in a writing skills class gave no leeway for poor grammar or sloppy sentence structure. I did not have to struggle with grades over basic faith topics since he was a Seventh Day Adventist. However, I justly feared and deserved his well-used red pen. I suspect he graded us harder because he felt Christians should be earnest in their studies. Besides that, technology students were notoriously poor writers. I certainly did not learn to write better until composing my Master’s thesis.

Pastor Charles Williams

Charles (Charlie) and Dee Williams newly came from Asbury Theological Seminary in Wilmore Kentucky. He observed the 2/1970 spontaneous revival at Asbury (Bible) College. (Book: *“One Divine Moment”*, Robert Coleman, 1970, Fleming Revell)

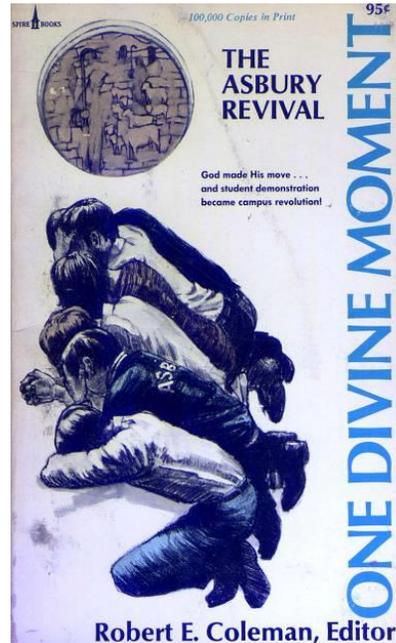
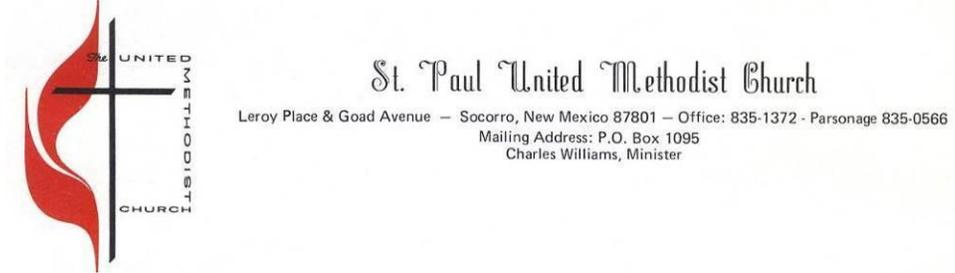


Figure 42 - Charles Williams at 1972 Parade – Asbury Revival -1970

As a response to Explo’72, the Wesley Foundation college group (described later) assembled a flatbed trailer float for the 10/1972 Forty-Niner’s Day Parade. Colored facial tissue woven into the chicken wire fencing said “Yesterday, Today, Forever” on the sides and “Jesus” for the front-cap. Pastor Charles Williams and Linda Loulan (Simmons) led us in popular Jesus People choruses with their guitars.

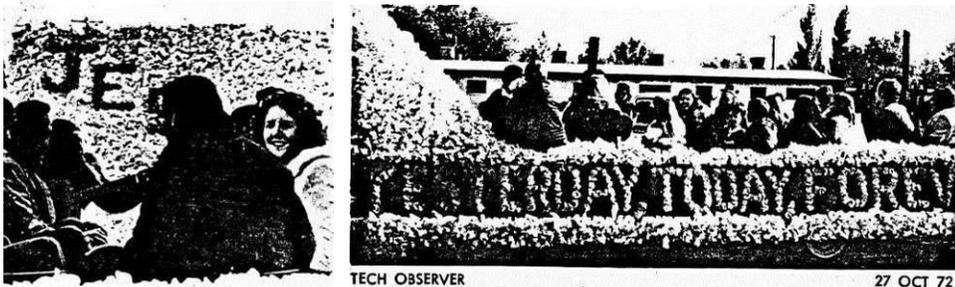


Figure 43 - Wesley Foundation Float (Tech Observer 10/27/1972)

Professor David Shortess recalled in 2012 (edited):

Prior to 1970, there was minimal activity among churches for campus ministry. I think the Catholics had a Newman Club. The Wesley Foundation met at St. Paul each Sunday evening with a light supper as the Tech cafeteria was not open Sunday evenings. I asked what the Wesley Foundation was all about, and the pastor said they used the meal to induce the students to come, and once in the building, there could be some teaching, but as far as I could see, that never happened. It was just a social gathering involving six or so hungry students.

When Charlie Williams got there, the whole thing changed. Spiritual food replaced hot dogs and sandwiches. Although it seems incredible considering the impact he had, he stayed less than a year.

Charlie and the students created a mixed reaction at St. Paul. Some of us were quite caught up in the movement, but others took a dim view of it all. They liked the enthusiasm of the students, but complained that they were "poor students who could not contribute much financially" [to the congregational budget]



Dr. Shortess (T. Asher 5/1975)

Indeed, these financially poor students were part of something that I have rarely seen repeated elsewhere. There was great spiritual wealth. It was God at work and we had the privilege of being right in the middle of the spiritual explosion.

Professor Shortess continued (edited):

Charlie soon took a position as youth pastor at a Methodist church in Hobbs, New Mexico. He did not last long. His strong charismatic tendencies probably played a part. He left the Methodist Church and felt that the Lord called him to begin an independent ministry in Albuquerque. It never got off the ground, and after a year or so of debt, he threw in the towel and took a secular job. He moved to San Angelo, Texas, doing computer-related work. Eventually he paid his debts, and gradually developed "Cross Talk Ministries" in San Angelo. I think it involves a radio call-in ministry.

In 2014, Charlie and Dee Williams were ministering at a small church in Texas.

My Introduction to Liturgical Worship

My approach to life was greatly influenced by liturgical concepts, both Christian (during college and early career) and Jewish (in my mid-life). Since I had no church experience as a youth, I had no preconceived biases for or against these styles of church worship.

Socorro Christian Church had an evangelical flavor. St. Paul's United Methodist Church had a liturgical flavor. My faith started as a friendship with Jesus and not of ritual. The rituals thus came to me as ways of expressing my love relationship with God. The rituals did not feel like obligations. If merely rules, they would be lifeless and dreary. My relating to God as a friend infused the rituals with heart-level meaning and enthusiasm.

A liturgy is a preset organized form of worship with set prayers, a set agenda, or a set schedule. Catholics called it the “*Sunday Missal*”; Episcopalians call it the “*Book of Common Prayer*”; others call it a “Prayer book”; and the Jewish community calls it a “*Siddur*” (Order). The liturgical year tracks annual events that reflect the story of Jesus. The liturgy represents these seasons by colors, banners, apparel, and Scripture readings.

Liturgical churches arise from early church roots. These denominations include Eastern Orthodox, Roman Catholic, Lutheran, Presbyterian, Episcopal, and Methodist. While these denominations vary on doctrinal points, they have a similarity in liturgical practice.

All other denominations trend towards an evangelical loose form of worship. The odd twist is that even free-form congregations have an expected schedule for the routine worship service. Therefore, in the loosest congregation, we are all liturgical in nature. God has wired us for a sense of order and we get unnerved whenever that order is upset.

The Christian liturgical seasons start with Jesus birth (Advent, Christmas/Epiphany) and death (Lent, Easter) and closes with the birth of the church (Pentecost, Kingdom tide).

- Advent is four December Sundays leading up to Christmas (the Advent) which celebrates the birth of Jesus (the light of the world according to John). Christmas aligns with the Jewish festival of Hanukkah (the winter festival of lights due to the cleansing of the Temple during the Maccabean Revolt (168 - 135 BC)).
- Epiphany celebrates the Magi from the East to honor Jesus a year or two after his birth. Eastern Orthodox celebrates Epiphany, much as the West celebrates Christmas. The “Twelve Days of Christmas” count from Christmas to Epiphany.
- Lent, 40 days (not counting Sundays) before Easter, leads up to Passion Week, the week when Jesus was crucified. The number 40 echoes the 40 years in the Sinai by Israel, but focuses on the 40 fasting days by Jesus in Judea after his Baptism.
- Easter celebrates the resurrection and directly links with the Jewish festival of Passover (and Feast of Unleavened Bread). The 50 days from Passover, which the Jewish community calls “counting the Omer”, the Church calls Easter tide.
- Pentecost celebrates the Jewish festival of Shavuot, 50 days after Passover, and the coming of the Holy Spirit with miracle power to birth the new church.
- Kingdom tide is a recent innovation (Methodists and Presbyterians) that reflects the church in action because of Pentecost.

Lay Witness Missions

A weekend of Christian encounter came under several names, notably “Faith Alive” (Episcopal) and various versions of “Lay Witness Missions” (LWM, United Methodist).

Ben Husted gave an early history in a 1/19/1982 letter (edited):

The 1971 revival that swept the campus was well on its way with roots back to the first LWM at St. Paul’s on February 7-9, 1970. Several of us who were religiously working at being Christians in the Wesley Foundation had a valid touch from Jesus and started Bible studies. Over time, our fresh touch got stale. Some went on more LWMs and some attended a men’s retreat that exposed us to charismatics. By early 1971, [before I graduated,] my Christian experience was pretty much a memory.

Then, Charles Williams arrived fresh from a big skirmish in Texas over speaking in tongues. That summer and fall, some received the Baptism [of the Holy Spirit] and the flavor of Wesley foundation changed to that of a charismatic group. I received the Baptism in the Holy Spirit in late 10/1971 following a Full Gospel Business Men’s Fellowship International meeting in Albuquerque.

By December, I enrolled at Perkins School of Theology at SMU in Dallas. What a shock! - MSCH Newsletter, 4/1982, Vol.3 No.2

Ben has ministered in small churches in Oklahoma through 2014 where he continued to actively promote LWMs and Walk to Emmaus weekend events.

I wrote in the MSCH Newsletter, 1/1982, Vol.3 No.1 (edited):

[David Shortess and Ben Husted had already been working with Pastor Charles Williams in the summer of 1971. I had arrived at Tech in 6/1971.]

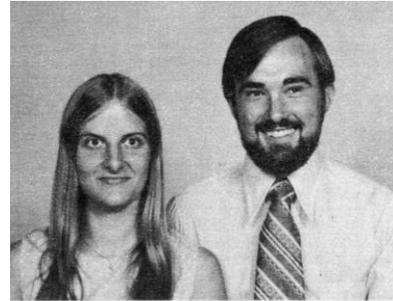
A charismatic retreat [called “Youth Encounter Weekend” of the LWM movement] at St. Paul UMC held on November 19-21, 1971 boosted the revival that swept the campus and spawned the MSCH.

[That retreat included] *Liz (Beth Gonzales) Schmierer, David Shortess, Christine (Fox) Davies, and Mary Ann (French) Cheney. In March 10-12, 1972, a **second** adult LWM [at St. Paul’s] attracted Donna (French) Spiering, [Regina Perkins,] and myself.*

As part of the protocol, the pastor published evaluations from the closing meeting of the Youth Encounter Weekend after the visiting witness team had gone home. Saturday was the key day of small group discussions and evening prayer. The evaluations (edited) for that 1971 weekend included the following student responses.

:

I received the Baptism of the Holy Spirit. It is great to know that He is in me. I know now that I can do greater and more powerful works. -
Christine Fox (Davies)



Mr. & Mrs. David Davies

I received the Baptism of the Holy Spirit. I am looking forward to what God has in store for me. -
Mary Ann French (Cheney)

[Mary Ann became a career math and science teacher at Christian high schools in Fremont California and later in central Texas.]



Mary Ann French

I made my final decision to go into the work of the Lord –
Liz (Beth) Gonzales

The Lord has shown me more love. It just keeps getting better and better. I now have more courage to go out and witness for the Lord. -
Priscilla Baldo

I was mixed up and farther away from Christ than I was in a long time. Saturday night brought me closer to God, and it is great! -
Gayle Little

This whole thing is wow! I realized I was confused, lost, and searching. This Sunday morning I gave my life to Christ, and I feel great. -
Karen Kloss

Many of those same students, including myself, went as a large college team to the LWM in March 23-25, 1972 held for the Portales United Methodist Church.



An enthusiastic team of witnesses from Socorro makes plans to come to Portales: (front) Jim Baldo; (second row, left to right) Elizabeth Gonzales, Wealthy Shortess, Pris Baldo, Donna French, Carrie Meade, Linda Loulan, Dr. Rudy Jacobson; (back row) Mary Ann French, Dr. Dave Shortess, Earl Eiland, Jerry Simmons, Robert Meade, Harry Briley.

Figure 44 - Lay Witness Team (The Portales Methodist 3/1972)

I wrote in the MSCH Newsletter, 1/1982, Vol.3 No.1 (edited):

That summer of 1972, the Wesley Foundation had over 20 students regularly attending, adding: Ken Hill, Robert Heid, Jerry Simmons, Rudy Jacobson, Fred Baker, Gary Schmierer, Terry Asher, Lee Gagner, David Briscoe, Earl Eiland, Kim (Johnston) Eiland, David Snyman, and others.

Robert Kirby recalled in 2014:

Mary Ann French (Cheney) took me (a long hair Catholic and brand new believer in 1973) as a member of a LWM team to the Hatch United Methodist Church because I could play guitar and lead singing. We met the Christian Folk from El Paso through or during that weekend [which brought that singing group to our attention in Socorro.]

Since the Lay Witness team stayed in church members' homes, I was assigned to stay with the red-neck pastor, named 'Hoss', who took a seriously dim view of longhair hippies and an even dimmer view of Catholics. He kept this to himself at first, but told me on Sunday after lunch that my weekend stay in his home had modified his opinions of hippies and Catholics.

A Send-off to Seminary

In small town newspaper with a population of 6000, every social event is newsworthy with details including the guest list! This news article occurred on my 19th birthday. The names in the center column act as a membership list of our faith community in 1972.



MR. AND MRS. ROBERT MEADE

St. Paul's Methodist Church was the setting Sunday at 3 P.M. for an ice cream social farewell party honoring Mr. and Mrs. Hamilton Still who are moving to Lubbock, Texas and Mr. and Mrs. Robert Meade moving to Fresno, Calif. The hostess table held an avocado cloth, a centerpiece of yellow and white daisies, a cut glass punch bowl holding fruit punch, two cakes, a plate of chocolate chip cookies, and delicious homemade ice cream in the flavors of banana and vanilla. On another table was a money tree for the two couples that featured daisies, greenery and red bows.

Those attending the farewell party were as follows: Charles and Joyce Smith, Cecile and Ruby Jacobson, Leslie, Graig, and Grant, George and Leila Miller., David and Wealthy Shortess and Marie, Sarge and Pearl Sanders, Tina Little, Gayle, Paula, Vannetta, Rayna,

Randy, Bonnie Houston, Harry Briley, Jim and Priscilla Baldo, Earl Eiland, Terry Asher, Steven Hughes, Shirley Edwards, Irma Edwards, Charles and Dee Williams, Tonya and April, Karen Tripp, Mr. and Mrs. W.E. Dennis Sr., Robert and Carrie Meade, and Mrs. Young.

Mr. and Mrs. Hamilton Still's new address is 3204 32nd St. Lubbock, Texas 79410. The Still's have lived in Socorro for approximately four years coming here from Texas where they taught for many years. Mrs. Still's position here was the Media Center Specialist at Torres Elementary School. Mr. Still taught Math at Socorro High School and was manager of H & R. Block for the year 1971-1972.

Carrie and Robert Meade have resided in Socorro for the past three years coming here from Santa Fe. They both attended New Mexico Tech with Carrie

born on wenesday, August 23, at 12:07 and weighed 8 lbs and 3 ounces and was 20 inches long. Maternal grandparents are Mr. and Mrs. Fred Lee of Cookville, Tenn. Paternal grandparents are Mr. and Mrs. W.T. Brunson Jr. of Magdalena. In the Brunson family there have been five generations of first born sons.

majoring in education and Robert in general studies.

In Fresno, Calif Robert will be attending God's Army Seminar of the Bible, studying to be a minister.

Mr. and Mrs. Still and Mr. and Mrs. Meade will be missed by their friends The party was huge success.



Figure 45 - Meade Send-Off (Defensor Chieftain 9/7/1972)

Their 1971 Youth Encounter Weekend evaluations included (edited):

We prayed for my boss's kids to be converted. I brought one to every meeting. She enjoyed them very much and really learned a lot. - Carrie Meade

I felt the Spirit moving through me, but felt that I had reached a plateau and have been anxious for two weeks to move out in the Spirit. Saturday night I talked with a team member and the Lord made me realize that I needed patience. When the Lord wants me to move, I know that I will move. - Robert Meade

Robert and Carrie indeed moved to Fresno to attend "God's Army Seminary of the Bible". Robert remarked that area winegrowers thought that Jesus People judged them about alcohol. He found a gentle way to get a hearing about living for Jesus. I lost contact with them by 1973 and wish I knew the rest of their story.

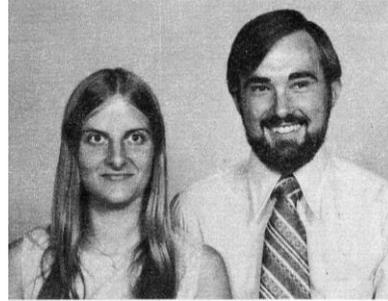
These several college faith friends appeared in the 1973 St. Paul UMC Membership Directory. Not everyone had a photo taken. We each became like an extended family. Several had serious life twists and turns over these 50 years. However, looking at these youngish Jesus Kids today, I recall how much we valued Jesus in our daily lives.



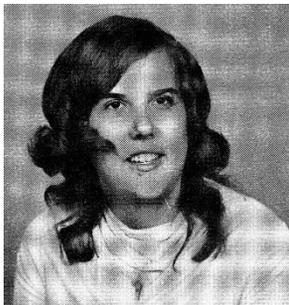
Steve Cave



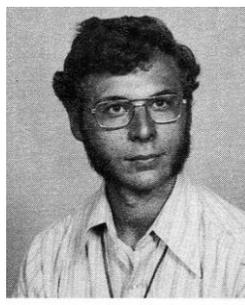
Bert Cheney



Mr. & Mrs. David Davies



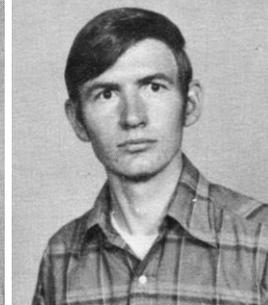
Mary Ann French



Earl Eiland



Mike Hawley



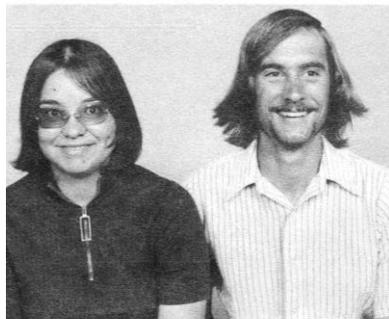
Steve Hughes



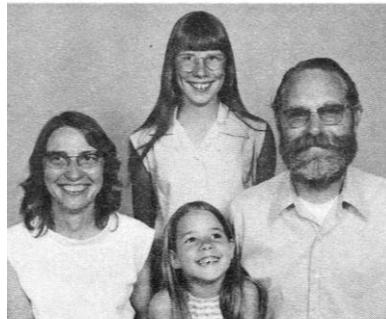
R. H. Jacobson Family



Mr. and Mrs. David Pena



Mr. & Mrs. Gary Schmierer



Dave Shortess Family

Figure 46 - St.Paul UMC Directory (Selected Photos) - 8/1973

Colliding Plaza Concerts

The coalescing of the Christians on campus at St. Paul's UMC caused us to consider being publically faithful for Jesus in ways beyond our normal campus routine.

I wrote an article for the Socorro Sun, 7/21/1972 (edited):

JESUS PEOPLE IN SOCORRO- On Saturday 7/8/1972, two separate groups arrived from Albuquerque for the afternoon. One of the groups, 26 strong, came from "The Answer" in a bus with a three-foot high "JESUS" painted on both of its sides. At Socorro Christian Church, their speaker Harry Hart stated, "We do not know how to argue or debate. We just know that Jesus is our Lord and Savior and we want to share with you the love he has given to us." This introduction led into a folk-rock proclamation of their changed-for-the-better life in Jesus Christ. Most of the music was quite lively and expressed the joy of those present.

However, their seriousness showed when their songs were sung as a prayer. Mr. Hart mentioned the need for the whole of God; the Father, the Son and the Holy Spirit, in each of our lives and for the entire town of Socorro. After prayers were offered, the equipment was loaded into the bus and they headed to the Plaza.

*At the same time, the other group, 50 strong from the Sandia Baptist Church Choir and Band, were already at the Plaza. Their program at 2 o'clock was billed as a Christian Folk-Pop-Rock Musical entitled "**Show Me Jesus**".*

Their speaker, a college student from Albuquerque, said, "Accepting Jesus Christ is similar to my peeling an orange and showing obvious enjoyment with each slice as I eat it and then asking you 'How did that taste?' Although you can know about Jesus, just as you can know about how good an orange can taste, [you cannot know] how good the one I just ate tasted. Similarly, you cannot know Jesus until you have accepted him as your Savior on this earth with faith."

That obvious enjoyment was evident in the smiles that afternoon. An invitation to accept God's love and forgiveness of our sins and to let Jesus come into our lives was put to the audience. After a time of prayer, the group broke into some lively music, which topped off the program.

At about 3:30pm the group from the "JESUS" bus [then] set up their equipment earlier than planned and therefore held the concert over until a little after 5 o'clock. This provided time for both groups to interact with the audience and were able to talk with many of them. During this three-hour span, heavy traffic around the plaza, parallel parking, and circling police cars were the mode of the day. The group from the "Answer" then [broke] for dinner, returning in time for a third concert held at the Assembly of God Church, temporarily renamed as the "Maranatha" [coffeehouse]. The evening closed out around 9:30pm.

Two 1972 Coffeeshouse Attempts

Indeed, that early 7/1972, a freshman and I started a fledgling Coffee House at the Assembly of God church, then on 210 Garfield. Their pastor was willing and my colleague had the energy. We printed hand-drawn flyers using a stenograph machine stencil. We used blue paper to portray “quality” (since not plain white paper). This was a new foray into advertising, but the operation was woefully amateur. Being off-campus in a church only flushed out a few students in the Jesus movement. That cadre of students launched the more enduring Mustard Seed Coffee House (MSCH) on campus.

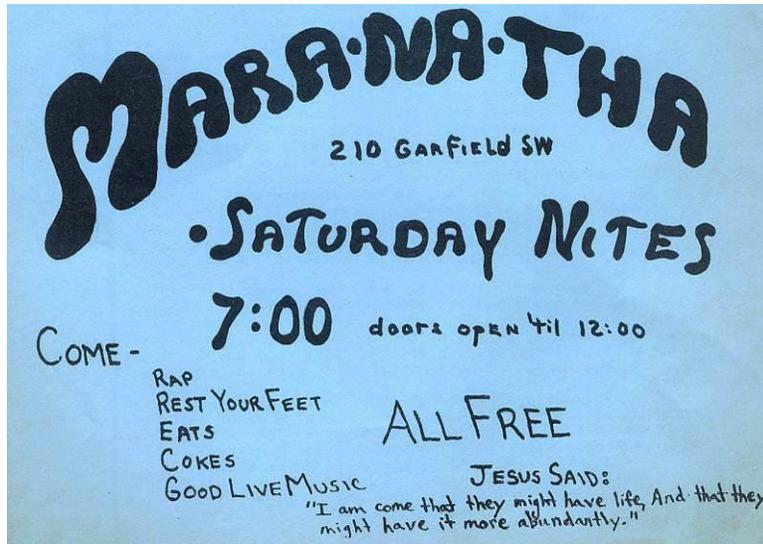


Figure 47- Maranatha Coffeeshouse – 7/8/1972

In late July 1972, some others tried starting another church coffeeshouse at 181 Grant. The hopeful advertisement showed a complete lack of understanding of Tech values. While attempting a bohemian Greenwich Village venue, it appeared that drama, acting, poetry readings, drawing, and painting held no interest to our scientific community of students.

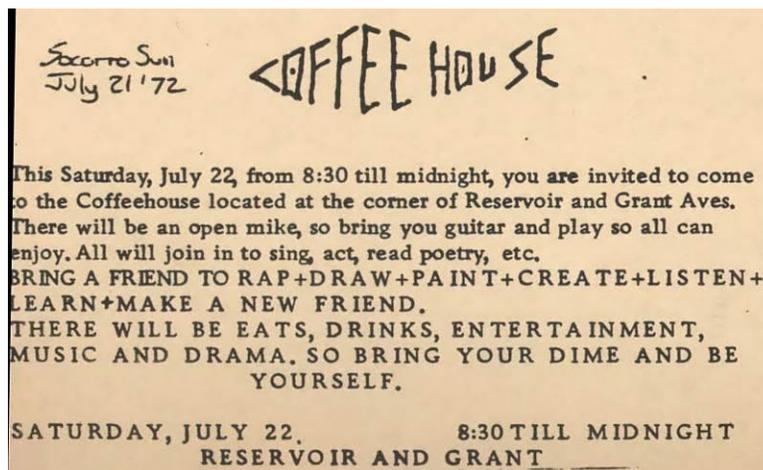


Figure 48 - Coffeeshouse (Socorro Sun 7/21/1972)

Jail Chaplain Intern

Dr. David Shortess could not recall his jail-visiting ministry, even though it was significant to me. He did this for only a short time, invited me along on two occasions after church, and passed the entire task onto me that September.

In my sophomore year (9/1972 through 6/1973), I was the only chaplain for the Socorro County Jail. I visited cell by cell each Sunday afternoon. There were two cells for the “drunk tank” (sometimes sober when I arrived), the jailers office area, and the main eight cells in back with a central corridor (four cells on each side). The officers gave me full corridor access due to my scheduled routine. It felt a bit like Andy Griffith in Mayberry.

Towards June, dangerous criminals arrived at the jail. One Sunday, these included Black Muslims (Black Panthers) who loudly railed against me for even greeting them. They tried to shout over my quiet prayers with other remaining but grateful prisoners. Oddly, this hostility made the local prisoners exceedingly receptive to my visit and comments.

A year later, the Country created a visiting room with small bulletproof windows and a telephone intercom. They only allowed visits to prisoners who pre-arranged a visit. My days of cell-by-cell visits like an old country parish priest ended abruptly.

Socorro Ministerial Alliance

The Methodists and Presbyterians sponsored my internship as a jail chaplain under authorization of the Socorro Ministerial Alliance. Several congregations prayed and the Presbyterians supplied Bibles from the American Bible Society. Being naive about denominational divisions, I assumed that camaraderie among local pastors was normal Christian behavior. These friendships indeed formed but not as the original purpose.

This alliance came out of the pressure of many transients travelling between Albuquerque and El Paso essentially fleecing small trusting country churches. Each seasoned grifter would methodically make the rounds of every pastor providing a canned speech of dire hardship while seeking “just enough money” to make it to whatever intended destination.

The pastors soon wised up to the sham parade and selected a rotating pastor on call for each calendar month to handle disbursements of gasoline, restaurant, or motel vouchers. A transient could get help once during the month. To put teeth into the new policy, the pastor sent the transient to the Socorro Police for a background check. The police department then called the pastor on call to get authorization for appropriate vouchers.

Suitably, when the cash-option dried up, legitimate travelers in need got the services that truly helped them on their way and the professional grifters bypassed Socorro. Those with malicious intent moved on down the road and never appeared at the police station.

Media Coup in 1972

The brief ability to influence campus newspapers attracted several Christian students.

I wrote in the MSCH Newsletter, 8/1982, Vol.3 No.3 (edited):

*News clipping during 1972 showed how Tech saw us (as an ingrown toenail) and how we saw ourselves (because we **were** the media). The linkages between campus newspapers and the following MSCH Alumni were:*

Conservative Observer: Robert Heid, Paul Jansen

Tech Observer: Kimberly Johnston (Eiland) - editor,

David Snyman - advertising, Connie Jones - typist,

David Briscoe, Mike Hambrick, Melanie Schuler - staff writers,

Terry Asher, Ken Hill, Lee Gagner - photographers

The Gold Pan: Lee Gagner – photographer, David Pena – Guest Writer

People-To-People: Kimberly Johnston (Eiland)

Socorro Sun: Harry Briley – Guest writer

Most of us felt drained by our junior and senior year studies. We felt lifted to see David Pena pen a few words on our behalf in the 1974 Gold Pan.

I have no [media presence] evidence for 1975 or 1976. Those years marked a lean spiritual time for many. The Brother's House was decimated by [marriages]. The Sister's House barely got off the ground for the same reason. Most of 1976 was a time being acquainted with our spouses. The MSCH took a tumble in support. Fortunately, the Lord prepared a new crew of High School Christians to take the reins. We visited in 1977 and met the new leaders. Now, Tech awaits the next wave of the Spirit of God to blow into the hearts of the new undergrads.



Figure 49- Gold Pan - Weekly Paper- 1973

Secular Pushback

A detractor published the “Tech Game” in The Gold Pan campus newspaper (5/9/1973). His board game used tokens with the goal of exiting Tech. The board had many “hazard” squares and flagged us as an early hazard. We took it as a friendly poke even though Gary Weller had absolutely no intention ever to become a JF (Jesus Freak).

TECH GAME INSTRUCTIONS

by Gary Weller

2 - Mustard Seed Coffee House. To escape, you must roll a 1 or a 6. If you fail to escape in 2 turns, you become a J. F. and must sacrifice every 7th move in order to go to church. (If you land on the same space as a non J. F., you convert them into a J. F. also).

3- Physics test. Must roll over a 3 to pass and move to another square.

Figure 50 – The “Tech Game” roasts the MSCH (Gold Pan 5/9/1973)

The MSCH in practice had a positive reputation of being a welcoming, if unusually odd, campus community crossing many external denominational lines.

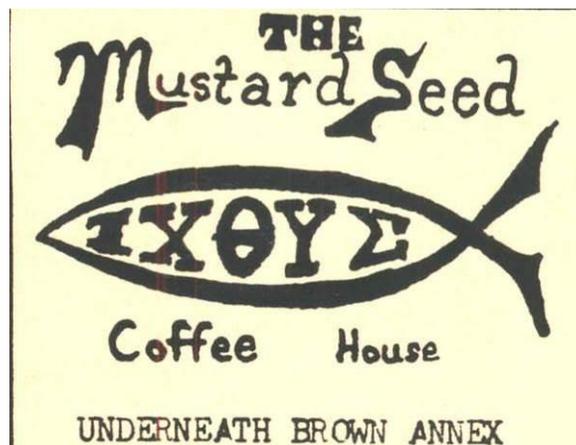


Figure 51 - MSCH Advertisements (Gold Pan 2/1/1974)

We were aware that other campuses had national Christian groups, but Tech had no external religious campus associations in the early 1970's. By the late 2000's, there was a national Navigators chapter on campus.

Huge Events in Albuquerque

Several Jesus Rallies occurred over the summer. Pat Boone spoke at the 6/15/1973 Rally held at the Civic Auditorium in Albuquerque. Nicky Cruz of *“The Cross and the Switchblade”* spoke on 7/21/1973. A young Bob Schroy coordinated each free rally.

The Milwaukee Sentinel (6/8/1974) wrote (edited):

Rev. Robert Schroy, age 29, is a 1969 graduate of Trinity Seminary in Deerfield, Illinois. While serving as pastor in Anaheim California, he had a “spiritual experience” that “put me into a whole new dimension.” He founded the organization which brought Pat Boone, Nicky Cruz ... to people not necessarily found in churches but who will attend assemblies of this type. Many of the directors are interested in the interfaith charismatic movement.

The Jesus Rally started with a choir, greetings from local pastors, a notable speaker, an offering, an invitation to faith, and most unusual, a call for baptism by immersion. Each Rally used several large aluminum water troughs for horses. Hundreds of people, young and old, walked forward for baptism. They used every pastor to handle the demand. I assisted in crowd control in two events for these baptisms and helped people up the stairs over the rim of the troughs. With no advance notice, people stripped to their pants and shirt. Helpers handed towels to the dripping but widely smiling newly baptized believers.



Figure 52 - Jesus Rallies (6/1973), McDowell (11/1973)

During November 14-16, 1973, Josh McDowell presented three large-scale evening lectures on the University of New Mexico campus. Campus Crusade for Christ arranged this with the Christians on Kirtland Air Force Base. I attended “The Great Resurrection Hoax” (from his 1972 book *“Evidence that Demands a Verdict”*), and “Maximum Sex” (about marriage). A controversial, best-selling 1965 book, *“The Passover Plot”*, by Hugh Schonfield, provided the theories against which Josh responded (namely that Jesus was drugged to appear dead and that the appearance of Jesus was a human imposter).

Ridgecrest Christian Church – Excommunicated

During my two, six-month tours in Albuquerque, I immediately became involved as an assistant to the youth pastor, Ed Skidmore, at nearby Ridgecrest Christian Church with high school students. This church was across the street from my San Mateo Boulevard apartment and belonged to the same denomination that I preached for in Socorro.

Between tours, they published my letter in “The Ridge Runner” (2/13/1974):

Dear Brothers in Jesus, I am in Socorro back in school, with Socorro Christian, and the Mustard Seed Coffee House. Praise the Lord! This semester is only a week old and already three or four major prayers have been answered! God is moving mightily here as this [will become] a crucial semester for the Lord Jesus and for New Mexico Tech. I hope the Holy Spirit is as powerfully moving there as it is here! Remember that HE is part of the Godhead too.

During my second tour in 1974, they invited me to help prepare Junior High students for quiz teams covering the book of Acts that September. Naturally, that book attracted my interest and I gladly followed the quiz material. We practiced mid-week in the evenings.

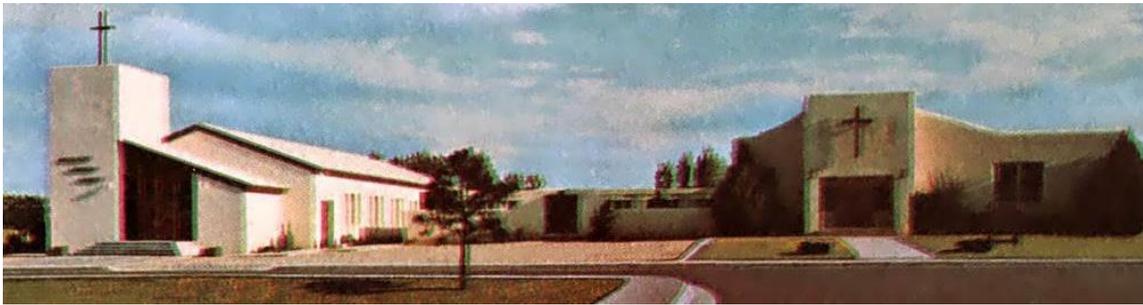


Figure 53 - Ridgecrest Christian Church - 1973

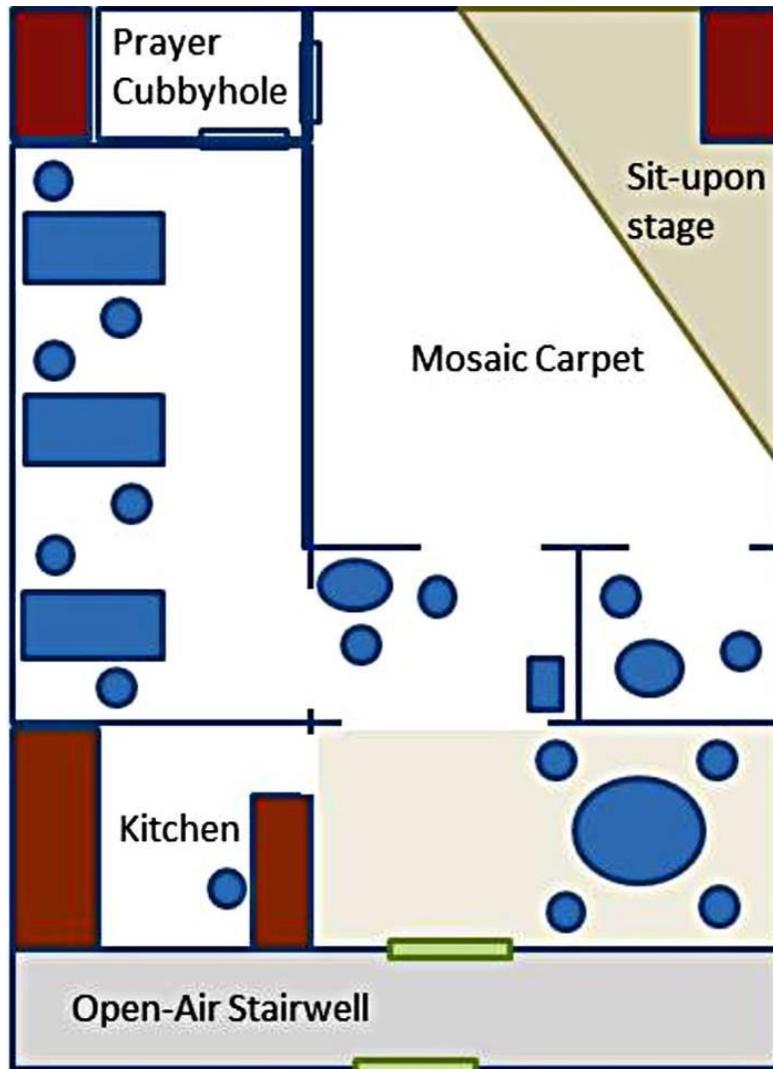
When I walked one night into the parking lot, some men whom I presumed to be among the elders approached me in the darkened lot. They said they could not allow me to continue working with the youth. This caught me by surprised and they asked whether I spoke in tongues. Since this was never a topic of a conversation with the youth, I was not sure if they were merely fishing or were following up on gossip. Since asked directly, I affirmed the charge and added that I never brought it up. Nevertheless, they disinited me fully from the church itself and they obviously blocked my way towards the building. I appealed to the pastor and they granted an appointment with the assistant that week.

The new assistant pastor and I calmly discussed the topic of cessation theology. He brought out the usual point that the Bible fulfilled the “that which is perfect to come” in First Corinthians. I countered that the same passage can only refer to Jesus given the immediate context about seeing Jesus face to face. He provided a teaching essay by James Cole about the Holy Spirit. The material soundly expounded the Bible but disclaimed any current application with an unsubstantiated paragraph at the end of the essay. I later met with senior pastor Tom Pendergrass who did not know about the confrontation. That senior pastor and I continued with friendly mail for some months.

Mustard Seed Coffee House (MSCH)

I was minimally involved as a Student Senator with the initiation and operations team of the Mustard Seed Coffee House (MSCH) beneath the Annex of Brown Hall in 10/1972.

This student team scrubbed, sanitized, re-plastered, and whitewashed the long abandoned Circes coffeehouse. The 500 square feet (20x25) suited our needs. The team retained the interior construction built for Circes. Bricks were crumbling from 80 years of hot steam pipes. Exposed 1893 ceiling vaults of red brick created a catacomb-like ambiance.



Basement floor of Brown Hall

Map 5 - MSCH Floorplan (assuming 20'x25')

The bright white paint made the place seem larger, cheery, and certainly cleaner. A pale hospital green refreshed the exterior door and kitchen area. We inherited a refrigerator, a coffee maker (for hot water), a cash register, and several bistro table sets. In the larger back room, the team fashioned a thick mosaic carpet using strips of shag carpet scraps, carpet knives, and industrial glue to the jute-woven backing of a discarded carpet.

I wrote in the MSCH Newsletter, 1/1982, Vol.3 No.1 (edited):

The Student Senate approved the MSCH charter on 10/11/1972. By December, the MSCH officially opened. We had the support from the Ministerial and Layman's Alliance, the Baptist, Methodist, Christian, Church of Christ, Assembly of God, and Catholic churches. The Presbyterian Church sponsored my Socorro County Jail outreach with Bibles. Our sole Lutheran representative: Ken Hill was part of the [initial management team] of the MSCH.

Geology professor Dr. Kuellmer, Dean of Men, had an office in Brown Hall. He was verbally irate at our nearby presence. Mysteriously, the Fire Marshall soon required an iron exit staircase as a deal killer. The administration moved to close down the MSCH with that report on the Regents meeting agenda. I was the only student in that meeting to my knowledge. Held in an intimate conference room, the tension was palpably thick. I was in way over my head. As a Student Senator, I gave the sole arguments in favor of finding a solution to the complaint saying the club would provide the labor. The stern faces made it feel like a lost cause. I was inwardly nervous and vocally quivering a bit.

After an eternity of a few minutes with minimal discussion, the lead Regent demanded that the administration immediately provide the necessary stairway for off-hours egress without cost to the MSCH. The college staff looked like deer caught in the headlights.

Plant Engineering showed up that week with an old industrial staircase from the TERA boneyard. They welded it in place and repaired the rusted swamp cooler. I had interned with this crew. They were enthusiastic to help one of their own and looked after us. We painted the staircase the same pale hospital green to match the building color scheme.



Figure 54 - Mustard Seed Coffee House (Yearbook 1976)

Back Row R-L: Tom Cafesjian, Francis O'Reilly, Robert Heid, Harry Briley, Robert Kirby, Terry Asher, Lee Gagner // **Middle:** Irma Edwards
Front Row R-L: Susan Rittenhouse Blair (Anne's sister), Gary Vansuch, Hal Simmons, Jesse Chisholm, Dr. David Shortess (Faculty Advisor)

We avoided external religious motifs topside (or signs of any kind) and only had an 8x11 paper sign on our stairwell door. The stairs allowed access after-hours. Otherwise, we walked from the basement post office to the hallway door that entered the stairwell.

The impact of the 1970 Asbury College Revival (Wilmore, Kentucky) spread westward while the California version of the Jesus Revolution spread eastward. Socorro was an isolated community that became an experimental closed-system to allow God's Holy Spirit to mix multiple backgrounds without interference by external organizations.

The resulting crucible of standing for faith in a hostile academic environment spun off some graduates as pastors, Christian school principals, and persistent lay leaders.

In 1982, the Fire Marshall condemned the space and only permitted storage (which the Business Office claimed). We begged and whined at the Marshall and Administration to keep it open through the 49'ers celebration. That 10-year reunion was my last visit to the MSCH. I do not know when the College (never a fan of the MSCH) reclaimed the space.

Abq Onearmedbandit, 11/2013:

I looked for the entrance to the Mustard Seed [in 2012]. Either they blocked it closed or built something around it so you can only get to it thru a locked interior door. Kennard Wilson and Jesse Chisholm were involved.

A student said the College covered the open stairwell with a concrete roof so the only access came from the basement hallway doorway. Plant Engineering cast a cross in the ceiling of that new roof. They were our best buds and helped us even on their own time.

Carl Brannen, 8/2012:

I hung out with the ardent Christians who had a place called "The Mustard Seed" underneath the admin building. Jesse Chisholm was a member among many others. It was a much better influence on students newly away from home.

Tom Reddie , 8/2012:

I remember the Mustard Seed! It definitely had the Groovy '70s feel to it.

Jennifer Hill, 9/2013:

You could get food at the Mustard Seed when nothing else on campus was open, I think, PB&J or something like that at all hours.

We purchased meats, cheeses, lettuce, varied breads, sodas, and two dozen tea varieties through the Tech Cafeteria. We made a weekly run there for fresh perishables and did not charge for our labor. The low mark-up covered maintenance expenses. Since we were open after the Cafeteria and SUB closed, we were not in direct competition.

In 2014, Walt Kubilius superbly described the MSCH ambiance of the 1970's:

The Mustard Seed was a much-needed venue at Tech. I visited the place often between 1974 and 1976. Christian students ran it as a mission endeavor in the basement of Brown Hall annex. The [1893] annex was the only useable structure that survived the fire that destroyed the original Brown Hall in 1928. Therefore, the Mustard Seed used the oldest structure on campus.

The word “basement” connotes a dark, moist, and perhaps cool place, but instead was cozy, well lit, carpeted, comfortable, and above all, warm. [The steam pipes for the radiators ran through the back two rooms. The pipes put out humidity at their ancient joints that crumbled nearby mortar between bricks.]

There was only enough room to accommodate maybe 15 customers, although no more than six or eight at any one time. The front room had a service counter selling cold cut sandwiches and soft drinks, and a table with four chairs.

Beyond that was a foyer with room for just a small table with tracts and books. Behind the foyer on the left was a sitting room with three customer tables of two chairs each.

Behind on the right was a smallish room where people could sit on the thick shag carpet. A black-and-white traffic sign having a big arrow with the words “ONE WAY” decorated one wall - a message heavy with Christian symbolism.

The Mustard Seed's success was not its food, as it did not have a grill, so they could not cook food. However, it was the only place on campus to buy snacks after the Student Union Building (SUB) grill closed at 9pm. This hangout was a comfortable place to spend time and socialize in a more intimate atmosphere than in the SUB. I always bought a slice of American cheese for five cents. I still snack on cheese today! [At six cents to stock, it became a loss leader since the staff deeply felt charging a dime was tantamount to overt robbery.]

Of course, the real purpose of the Mustard Seed was to proselytize the student body. The staff did not nag people or come on too hard, but were available to talk to folks who were receptive. They made some sales, too: I know of two who converted to Christianity, at least partially due to contacts at the Mustard Seed. However, religion did not stick and both eventually went back to secular life.



It was obvious who the Christians were. They worked behind the counter, sat at the front table, talked about Jesus, and prayed. Among the Christians, some leaders were able and willing to proselytize one-on-one, and some were in a supporting role by making sandwiches or just keeping the home fires going.

Talkers:

Harry, you were clearly one of the leaders among others, such as the blond mining engineer who took a job in Toms River, New Jersey [Robert Kirby].

There was a guy with a mild case of cerebral palsy [Owen Shilling]. Two discussions with him stick in my mind. We talked about abortion, and he said, “If abortion had been legal, I might have been aborted!” I can appreciate his point.

Another time we talked about the [Rock Opera] Jesus Christ Superstar. Owen was quite annoyed with the tradition of Mary Magdalene being a hooker. I was surprised and confused at the depth of his feeling. Of course, now I understand that he represented the classic Protestant view, where nothing is true if not supported by scripture. This is in opposition to the Catholic view, where orally transmitted knowledge complemented scriptural knowledge. Superstar followed that Catholic tradition about Magdalene.

In my first semester (summer 1974), I met a black guy [Noel Harris? Catholic?] whose little brother was at Tech. He explained the falseness of Latter-Day Saints (LDS) teaching as a timely intervention! I met some Mormons in my first week at Tech. They may have noted me as a potential convert.

There was a married couple, Todd and Elise Beckman. Todd had exceptional “street cred”. First, he was married (to a good-looking woman!); second, he was a former hippie and drug user. Therefore, Todd had been fully immersed in secular life but chose Christ anyway. I was disappointed that he did not frequent the coffeehouse more often. I guess he was moving on in life and was putting the student culture behind.

One person sticks in my mind. He had a short red-brown beard [a senior? Robert Heid?] and was definitely a leader. I clearly recall two scenes that illustrate his commitment to Christ. He prayed aloud once for an extended period and then suddenly spoke in tongues. I never saw anything like that before (and saw it only once again in my life). That was a very remarkable experience.

The second time occurred when I explained far-out physics like black holes and wormholes to Jesse. This guy listened for a while [at a distance] and then came over and said, “You know what this stuff does? It ignores the Day of Judgment!” Of course, our engaging physics conversation ended at that exact moment.

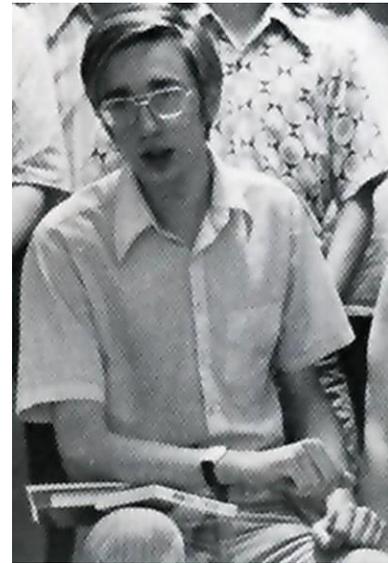
Support Crew:

Christians who I did not see proselytize were Jesse Chisholm, your future wife Anne, Tom Cafesjian, and Marie Shortess. My clearest memory of Jesse occurred when I bought some cheese. He set down his 7-UP drink on the counter before hitting the cash register, at which time the cash drawer popped open, kicking his soda to the floor and making a mess. [Poor Jesse!] Tom Cafesjian was a mystery. He was [a transient with a drug history] and I wondered what exactly he was doing in Socorro. [He said he could stay clean if he stayed near the coffeehouse but exhibited the jittery effects of methamphetamines (or ‘Speed’).]

I read two books on the literature table. One was a historical novel about Pontius Pilate, which I thoroughly enjoyed, and would not mind reading again. The other was on your suggestion: **“The Screwtape Letters”** [by C.S. Lewis].

I picked up several Jack T. Chick comic book tracts, not for the enlightenment, but as examples of kitsch. The Chick tracts were actively hostile to secular [and academic] life. If I were running a mission facility, I would not stock them as they [definitely] hurt the message more than helped it.

Overall, it was a friendly welcoming place and a positive part of the Tech experience. I thank you and the others for the hours to keep it open.



Walter Kubilius (Yearbook 1976)

Marc Valdez in 2014:

The Mustard Seed was a distribution point for Jack T. Chick evangelical tracts. Recently, I met a religious scholar at UC Riverside who is doing his Ph.D. dissertation based heavily on these pamphlets. He says Jack T. Chick is now in his 90's and living in Southern California

Charles Freestone in 2014:

You will never know how grateful I am for the time at Tech in St. Paul Methodist Church, Mustard Seed Coffee House, or the role the group played in turning me into the person I became.

Wayne Branson in 2014 recalled 1981-1982:

I remember the Mustard Seed scene. Good times. The people there were always kind. I normally played some chess and just had a soda while I studied for classes. The Mustard Seed was a peaceful and quiet place where I could focus on academics while having good friends around. There was one stairway in and out.

Megan Schwingle in 12/2019 wrote:

I had the chance to go into the basement of Brown Hall the other day and saw this [painted wall sign in the former stairwell, hidden for 40 years]! Was it there during your time at NMT? They are starting prep work of renovating Brown Hall. I hope it is not lost. It is on the wall before a doorway/hall to the right.
Development Officer, Office for Advancement and Alumni Relations



Figure 55 - Entrance sign after 40 years (M.Schwingle 12/2019)

Socorro High School Students

By 1973, the MSCH Coffeehouse had a small companion set of students at Socorro High School. The college age group lovingly adopted our faculty advisor's youngest daughter, Marie Shortess (now Clarkson), who attended Socorro High. She invited her friends.

On my third anniversary (3/ 23/1973) of God baptizing me into His Holy Spirit, one high school senior wrote to me in a card:

On Your Anniversary in God's Service: God has given me a new brother in you, and I just praise the Lord for it! God has done a lot for the High School through you, and I know the Spirit is fixing to invade SHS! And I just pray your special day is a blessed one! – Yours in Christ, Regina [Perkins]

Regina impressed us all while a high school senior with her confidence, sweetness, and maturity. She died too young as a young mother in 1989 [or 1992?].

A St. Paul UMC bulletin (5/1974) highlighted Regina (summarized):

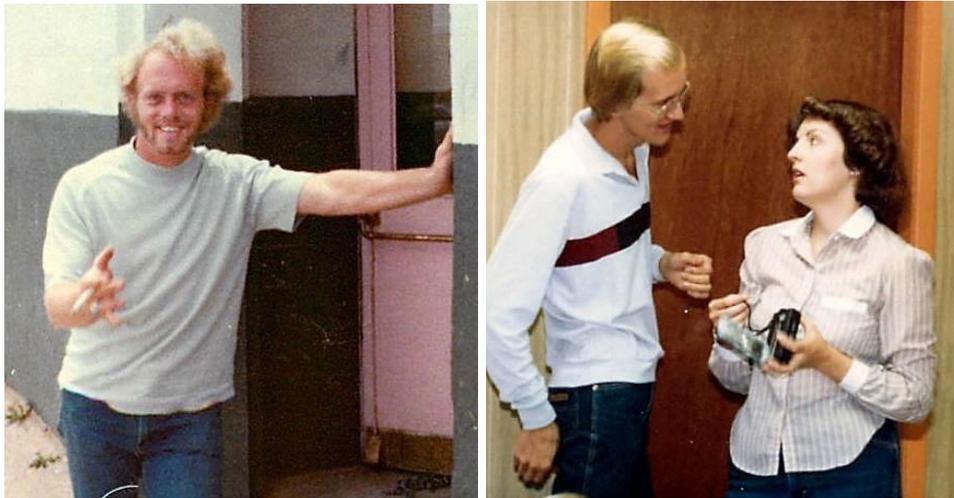
Regina (b.1956 [only seven days younger than Anne]) is from Socorro. She attends Tech and plans to enter Eastern New Mexico University. Her Christian pilgrimage began when Linda Johnson invited her to the [3/1972] LWM. Regina says, "Linda bugged me to go for months. Donna French and I were the only non-Christians there." A week following, Regina talked with Pastor Charles Williams, and on 5/16/72, publicly accepted Jesus Christ as Lord and Savior. Regina was baptized in the Presbyterian Church at age 13, but that was not her adult decision to enter the faith, though the Lord had already begun claiming her. Regina joined our fellowship in January [1974]. She now says, "God is teaching me patience and understanding of people."

Vernon Perkins wrote in 2012:

I am Regina's brother, five years younger. She graduated from Socorro High in 1974. You and your friends were a positive influence on her life and gave her lifelong devotion to Christ. I graduated in 1979 and then from Tech in 1986. You and some of the guys helped me with my math homework. You probably never knew but you, Earl, Steve, Lee, and some of the other guys had a profound influence on my life. I was not a dedicated student like Regina but she had a positive influence on my life, as did her husband Scott.

I remember the Baptist Student Union getting active at Tech during the early 1980s. I was 21 years old when Regina and Scott came up from El Paso for the MSCH Reunion [in 10/1982]. They stayed at my apartment on School of Mines Road. Regina passed away in 1992 after moving from Houston to Kansas. Her sons are grown and doing well. We still miss her very much.

I live in Aztec NM near the Four Corners Area. I like the area and my wife is from here. I was not the greatest Tech student but I have done well teaching high school for 14 years and then as a mid-school librarian the past 8 years. I was lucky to have grown up with Tech as a [spiritual] influence that shaped my life.



**Figure 56 – Left: Darrell (Lobo) Whitney – Magdalena, NM 5/1976
Right: Scott/Regina (Perkins) Strickler – Socorro, NM (S.Blair 10/9/1982)**

Patricia (Patty) Morgan in 2012 wrote:

[On my first visit to] the MSCH, I met you behind the counter making sandwiches. My [high school] friend Regina Perkins took me there. I was hooked. I met you, Anne, and a gal named Kathy Jo who once made [illegal] drugs in the Tech [chemistry] lab. I had a huge crush on Mike Lash, Ken Lake, a Dave, all at one time or another. Another crush I had was Noel Harris (a fellow Catholic). Noel's Birthday is on April 5, the day after my Mom's birthday.

I used to take my dog Pokey for walks just so I could fellowship at the MSCH. Sometimes I lied to my parents so that I could sneak off to prayer meetings, [and sneaking is] still not a good thing to do.

Claudio [Gonzales 1953-2018] from Albuquerque gave me a black-light poster, which said, "High on the Love of my Jesus". That was cool.

I remember a [young transient] named Lobo (I was such flirt back then!) who I kissed once while he was sleeping in the MSCH. It startled him so bad that he hit me, and I then hit my head on the [water] pipe above him. I got a nice scar over my right eye. I sell great cosmetics, which has healed it, and now you have to look hard to find the scar! Lobo was later murdered [in Texas]. Sad!

Playful Sermon Helpers

Pastor David Pena (later Pina) sought ways to harness his college contingent since it was obvious that we owned our faith and attended St. Paul's as our own church. The building had two small classrooms on a second floor over the fellowship hall at the rear of the sanctuary. A foot-square hole in one room looked up the aisle of the church. I suspected that the unusual elevated hole was a projectionist portal for 16mm movies.

During a sermon about the watchman, Pastor David read the Ezekiel 33 passage about being alert lest the sword come and harm the city. At that moment, one of the students rattled a real sword through that hole. He made such a racket that everyone turned around to see the sword quickly removed. David, in on the game, asked why everyone looked. A child mentioned the sword, but David said, "*I see no sword.*" He continued about the need to be vigilant. The sword rattled again through the hole and disappeared. The children no longer listened to the sermon but kept their eyes glued for a third appearance. Up went a joint howl, "*There is the sword!*" They did not remember the finer points of the sermon, but that sword got their attention.

David reminisced in 7/2015:

God so blessed us with great laughter along the way. Remember when you hid in the box for the children, and answered their questions? Oh my! That was so funny when you clambered out of that box, all 8 feet tall of you!!!

During one spring, we built a "Question Box" computer out of a cardboard refrigerator type carton to enhance the children's portion of the morning sermon. We wrapped it in white butcher paper and painted up knobs and lights. My job was to sneak inside the box with a microphone before the service and sit quietly until a child asked a question about the sermon topic. I had old-style kitchen timer that made a ticking sound and ended with a loud "ding!" Before I answered, I rocked the carton briefly while the "computer" thought of the answer. I handled two or three tentative questions and stayed hidden until the children headed off for their classes.

By early 1975, David introduced a "do-everything" weekly bulletin that listed a variety of options for the worship service, but not all of which occurred every week. This strongly appealed to the spontaneous nature of students but honored the scriptural injunction to have all things done decently and in an orderly fashion. We were part of the liturgical Methodist tradition after all. This experimental approach allowed God's Spirit to adjust the content of the worship service within a known framework. If there would be a baptism, there was a place for it. The most unusual event was a brief wedding ceremony as part of the responsive part of the service (normally when we gave our weekly donations or announced a call to the ministry). I suspect many older members of the congregation felt significant angst about these youthful variances but we never heard the complaints. Instead, we had several grandmothers urging us forward in our faith.

Points West

Several of us jumped into Dr. Shortess' station wagon to support Pastor Pena at his church services in Pie Town on the Continental Divide (85 miles west of Socorro).



Figure 57 - St. Paul Team at Pie Town Church – 3/1973

Front L-R: Harry, Charles Freestone (behind), Christine Fox, Shirley Edwards, Liz (Beth) Gonzales, Gary Schmierer (behind), Tom Cafesjian, Dr. Shortess (in car)

I once attended an old-fashioned cowboy Camp Meeting four miles down a gravel road south of Datil (65 miles west of Socorro) near the famous Montosa Ranch. The Very Large Array (VLA) radio telescope sat 10 miles away (operated from the Tech campus).

Cowhands attended this faith gathering in July from miles around. Guest preachers came from various traditional denominations. The “Datil New Mexico Ranchmen's Camp Meeting” team provided meals and trucked in equipment fully by donations alone.



Figure 58 - Montosa Camp Meeting (www.montosacampmeeting.com 7/22/2015)

Our specific lunch in 1975 was a donated beef steer as done since 1941. It fed 200 or so guests. I easily imagined the isolated grasslands scene reaching back into the 1880s. It reminded me of a Frederic Remington painting of a chuck wagon, an open campfire, and nearby picketed horses. Instead of horses, dusty ranch pickups filled the dry range grass.

Christian Folk

Mary Ann French and Robert Kirby met the “Christian Folk” from El Paso at a LWM in Hatch, NM. I arranged for an assembly at Socorro High School for these two couples (Bogard and Neergaard) solely from a motivational aspect. The singers invited students to the evening concert at Tech where they spoke openly about their faith in Jesus.



The Christian Folk are (left to right):

Lynn Ann Bogard: senior elementary education major at E.N.M.U., Portales, New Mexico.

Bill Neergaard: secondary music teacher, Alliance, Nebraska; church choir director and youth sponsor; baritone soloist for group.

Barb Powell: soprano for the group; freshman in physical therapy, Nebraska Western, Scottsbluff, Nebraska.

Dusty Neergaard: elementary music education major, private music instructor, church organist and youth sponsor.

Craig Bogard: senior theology major at E.N.M.U., Portales, New Mexico.

Figure 59 - Christian Folk (Album credits 1971)

The “Christian Folk” re-formulated into an inner-city children’s ministry called ASLAN in Red Bank, New Jersey. President Bush named them one of his “Thousand Points of Light”. Some MSCH students have supported their urban ministry for forty years.

Patricia (Patty) Morgan wrote:

I still sing "Follow" written by the "Christian Folk" who came for concerts. I taught it to my children when I briefly returned to New Mexico [in 2005]. I still have the music in my files!

They came to dinner with us and my Mom served her famous desert with ice cream, a pear, and Crème de Menthe. Some of the foursome would not eat it because it had alcohol! It struck me as odd later. Ha!



Patty Morgan in Silver City, 1974

Robert Kirby in 2014 reflected on that life-changing concert night:

I became hooked on marijuana as a [longhaired] freshman amongst the heavy drug users who lived with me in the President's Dorm basement. I was a good Catholic who attended services but seriously lacked something in my life. I talked with Craig Bogard after the Christian Folk concert at Tech down at the MSCH late that night. He told me about a personal God who meets our deepest needs.

This was a new concept to me. Since I was not about to let anyone see me praying, I squirreled away into the tiny "chapel" [prayer cubbyhole] in the MSCH kneeling and asking God, "If you are there, help me." I did not even believe there was a God as personal as Craig proposed. I had a vision of Jesus on the cross [in that tiny room and it was as if] he said that I could accept his offer or continue to work out things on my own. I was not that dumb to ignore a good deal when offered. My next rapid prayer was "I accept your payment for my sins, show me what I need to do next." There was an open Bible on the floor and it seemed as if I saw three words highlighted "Pray for faith". It physically felt like a ton of bricks lifted off my shoulders. I count that night as the time that I became a believer (the week before the St. Pat's [hedonism] in spring 1973).

A week later, Kathy Jo and I drove down to El Paso to let Craig know about my decision and to personally thank him for crucially helping me become a believer.

I got a job in Toms River, New Jersey an hour south from where the Christian Folk started their ASLAN ministry of tutoring inner city children.

I discovered that Ron and Echo Griffith helped support them into a singing group. Ron was a professor of music at ENMU, a vibrant faithful Christian, and lived in my hometown of Carlsbad! Ron, Echo, Debbie and I became fast friends.

My father later convinced me to return home to manage local mining operations. Several of us from my high school choir there started the Carlsbad Community Chorale in 2000 and together we sang in 2014 at Carnegie Hall in New York City. That New York trip allowed us to visit the Bogard's in New Jersey once again.



Robert Kirby, 2014

Hosted “Jesus Music” Concerts

In spring 1975, the MSCH crew connected with Destiny Records to host four country-rock bands in rapid sequence. I introduced the bands and recorded two of the concerts.

We hosted four bands: “Phoenix Sonshine”, “Hallelujah!”, “Redemption”, and “Harvest”. As can be told from their names, the Christian message was not subtlety hidden. In the 1970’s, the Jesus Movement musicians spoke plainly, openly, and evangelistically. Many had known the drug and hippie culture. Their discovery of Jesus profoundly affected the message in their music. They held nothing back from the audience.



Figure 60 - Hallelujah! - Redemption (Destiny Records 1975)

Like the “Christian Folk”, some band members continued into full-time ministry. Gary Cowan of “Phoenix Sonshine” later aligned with the Maranatha Music label (started by the original Calvary Chapel in Costa Mesa), and served Calvary Chapel churches in Colorado. In 2012, Gary became senior pastor at Calvary Chapel East in Albuquerque.

Mentors

Several standout mentor couples greatly encouraged the community. On the high end of the age spectrum were our sponsor Biology Professor Dr. David Shortess and his wife Wealthy. The students treated David and Wealthy as close confidants.

On the young end were Debbie and Dennis Woodard. They were young marrieds themselves (7/1974) and befriended those newly married or considering marriage. Debbie, now a grandmother, is still in daily school release time ministry in Socorro County public schools including the pueblo rural areas with InFaith.org (formerly named: American Missionary Fellowship).



Debbie/Dennis Woodward
(AMF Card 10/1974)

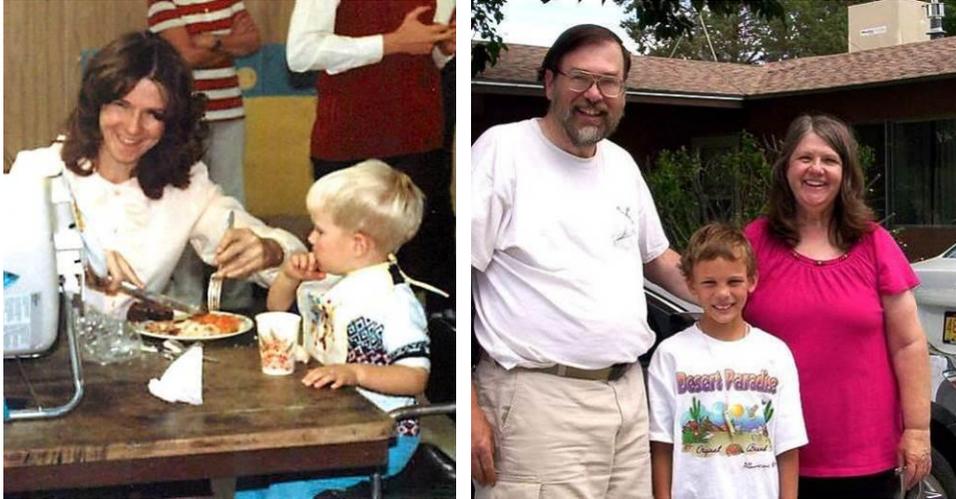


Figure 61 - Debbie Woodard, Socorro (S.Blair 10/9/1982) and 2012

Debbie offered this snapshot in 2012 of campus Christians in 1974-1975:

Looking over our AMF missionary reports, my first diary entry on 9/3/1974 stated, "Met Christians on campus." [Formally commissioned as missionaries on 10/13,] 1974, we met Pastor Dave Pena and attended the Wesleyan group [at St. Paul's UMC]. I started a young couple's Bible Study and meeting with various students for Bible Study.

Our first visit to the Brother's House [at 505 Long Place] was on 9/10/1974. Our first meal there was on 11/11/1974. It was so wonderful to meet students with like precious faith. Dennis was friends with Robert Williford. He and Lee Gagner witnessed on campus. Robert Heid and Marie Shortess accompanied us to Albuquerque, where we shared about the work in Socorro.

The report of 7/7/1975 states: "Calling: Harry and Anne." Evidently, we met with you and Anne for the first time on that date. We drove with you to Roswell for Todd and Elyse Beckman's wedding. I remember visiting you and Anne in your little apartment [adobe house] and I remember your love for the Lord and your zest for serving Him. I remember Anne's tender smile and sweet spirit.

The most important thought is that the body of Christ is beautiful. Fellowship within that body is one of the most precious things on earth. Friends who love and serve the Savior are the salt of the earth. New Mexico Tech believers were very salty in the seventy's.

Kids (and I considered myself as one of them) were sacrificing themselves for things that were higher and nobler in seeking Him daily and serving Him in their daily walk. The [Holy and kindred] Spirit was contagious, and I am glad that I was a part of it all.

Wesley Foundation

Regardless of our denominations, most of us students became active with the Wesley Foundation (a college age fellowship) at the United Methodist Church at the front south corner of the campus. Nearly everyone in the MSCH attended Wesley Foundation, and most of the undergraduates in the Wesley Foundation worked in the MSCH.



Figure 62 - St. Paul United Methodist Church, Socorro - 2012

Patty Morgan in 2012 described her experiences with Wesley Foundation:

Regina Perkins and Shirley Weaver took me to a prayer meeting at the Methodist church and everyone sat around me and prayed for me. I was stressing about the whereabouts of my brother Ken and that my sister Mary Ellen was estranged from my parents. Therefore, you and everyone prayed for me, and kept asking me if I had accepted Jesus as my Savior. After an hour, I said yes. I had no idea what you were talking about at the time. However, I still count 11/12/1972 as the day that Faith became real for me!

Soon after that prayer, my sister made up with my parents and my brother Ken was found in France (he had gone AWOL in the Army). It was the first time I felt God answered my prayers. I am thankful for that time in my life.

*Several of us went to see Nicky Cruz [as a Teen Challenge speaker and formerly a New York City gang leader] in Albuquerque, on my 17th birthday 7/21/1973. Dr. David Shortess took us. I think at that time I got baptized, which convinced me much later, that what my parents did for me when I was 8 days old was enough to start me on my journey of faith. We all went to see [the musical] “**Godspell**” in Albuquerque ... still a favorite of mine.*

I am very thankful for that part of my Faith journey. Before I realized what it meant to follow Jesus, I used to mock “Jesus Freaks”. That [attitude] is usually when God hits you the hardest. I did not know much about my Catholic faith [then, but] now I have returned and it is so precious to me! When I returned to the Catholic Church, all the things I learned at the MSCH, made sense to me. The things I grew up with in the church and the things I experienced at Tech, together helped my Faith Journey stronger. I am thankful!

Robert Whitis inspected Wesley Foundations in late 1974 and reported (edited):

Basic facilities are located at St. Paul UMC, immediately south of the campus. Use was given of whatever space in the church is needed. The parsonage was used on occasion. Rev. David Pena serves as part time director. Dr. David Shortess, Biology Professor, serves as sponsor.

Regular Sunday evening meetings usually run from two to four hours in length, involving a business meeting, teaching session, fellowship, and a prayer meeting. As many as 25 persons were served, including a few older high school youth. A mid-week prayer meeting meets at the church as an outgrowth.

A Book Table to give or sell religious books was set up by members at various points on campus. This was a point of contact for outreach. Minor activities included the [49'ers Day] parade, off-campus meetings, and participation in the [Sacramento Mountains Methodist Assembly] College retreat.

Probably most exciting, and [the inspection team] felt as most effective under the present situation, was the establishment of a "Coffee House" on campus, started largely by members; but not a part of the official program. The feeling was that the denomination [was not] part of this activity and that there was a real need to reach those who would not come to the Church. This coffeehouse meets in the Brown Building Annex basement, and has the [grudging] sanction of the college administration and student government. This program is openly Christian. Members attempt to make a witness in their personal lives on campus. A great deal of what is done there is generated from within.

Much of the activity appears to be spontaneous, without detailed previous planning, and this style largely appears to suit this situation. This flexibility seems to be one of the real values of the current program and too detailed a planning probably would adversely affect the Socorro situation.

During our cursory visit, the observation in the report concerning the Campus Ministry at the University of New Mexico, that the only student religious groups showing large gains in numbers were the "Jesus Movements," was upheld.

The group at Socorro noted that those who were not so inclined considered their members as "Jesus People". This was said with no note of apology and perhaps with some sincere pride in the fact.

Our Wesley Foundation attended the Sacramento Methodist Assembly only once. One other Wesley groups sang, "**Puff the Magic Dragon**" as the evening devotional hinting at the drug references rather than of Christ. That off-putting song choice highlighted the profoundly different spiritual focus and team bonding among our Tech crew. Only in half jest, we proposed a full immersion baptism by tossing candidates into the high snowdrifts alongside the road. In arid New Mexico, that idea held a strong appeal.

Wesley Foundation at Water Canyon

Our favorite picnic area near Socorro was Water Canyon. It is on the access road to Langmuir Lightening Observatory. A shallow small stream flows through a shady glen of scrub pines lining the arroyo. It was a pleasant way get away from the campus. The following photos list names as known at that time prior to subsequent marriages.



Figure 63 - Wesley Foundation, Water Canyon, Socorro - 9/1972

Charlie Williams speaks. L-R: David Shortess, Charles Freestone, Rudy Jacobson, Earl Eiland, Connie Jones, David Davies, Chris Fox, Jasha Cultreri, Susan Jones, Terry Asher, David Snyman, Unknown, Lee Gagner, Ken Hill, Kim Johnston (hidden), David Briscoe, Liz (Beth) Gonzales, Gary Schmierer, Wealthy Shortess, Linda Loulan, Jerry Simmons. Table: Cecil Jacobson, Dee Williams



Figure 64 - Wesley Foundation, Water Canyon, Socorro (B.Cheney 1/1973)

L-R: Robert Kirby, Robert Heid (sitting on his green Duster), Unknown, Connie Jones, Irma Edwards, Robert Williford (peering behind car), Kathy Pena (newly arrived), Dan Kirby, Mary Ann French, Michael Hawley (“One Way, Jesus!”), Marie Shortess, David Briscoe, Bert Cheney, Shirley Edwards, Harry Briley ... Bob Kirby, Marie, and Bert wear the wood crosses made by Charlie in 1972.

Weekend of Christian Challenge

San Miguel Catholic Church in Socorro invited a large team of believers from Tech, half not from Catholic backgrounds. We acted as table leaders and guest speakers for short Bible talks for a “Weekend of Christian Challenge” held November 21-23, 1975.

Each student suggested a topic, developed an outline, and talked through the outline at a planning session. The whole team met with the priest for a dry run with his helpful improvements. The priest was an arbitrator for any unlikely outlandish proposals.

In 2014, Lee Gagner explained how this remarkable retreat occurred:

Father Carl Hessinger (the priest that married Genny and me in 5/1976 at Santa Rita, NM) [felt at ease with non-Catholic students creating and leading many sessions because] he was a charismatic priest. He was a little unconventional.



Figure 65 - Gagner Groomsmen - Santa Rita, NM - 5/1976

L to R: Harry Briley, Robert Heid, Lee Gagner, Robert Kirby, David Briscoe

My topic was “My Body: The Temple of the Holy Spirit”. The church combined outlines and brief testimonies in a handout with room for notes. The parish so well received us that they asked for another weekend. The priest asked us to plan new topics for February 20-23, 1976. Lee Gagner and I jointly wrote a Bible study called “Christ in Us”.

Team member Maura (Kelly) Zimmerschied (Tech 1973-1977) recalled:

Looking back, I felt foolish that I imagined I could say anything worthwhile to the [adults], as most had decades of experience living with Christ as their guide!

Even as new believers, our youthful perspective could unlock scripture in refreshing ways to adults. Forty years later, my AWANA high school students amaze me with spiritually poignant insights. God uses the young to confound the worldly wise and to knock barnacles off us older wise. Here are three more of team testimonials from that 11/1975 weekend.

Gary Vansuch [Junior]

Mine is a personal transformation by belief in the saving power of Jesus Christ. Before I knew our Lord as savior and redeemer, I was an almost Christian. Since childhood, I was taught about the existence of God. I studied catechism hard for all the right answers and performed the right ceremony at the right time.

I grew older and formed an intellectual consent to the existence of God. Yet God was not a part of my life, I went my own way, did things in my own way, and was miserable. I was lonely and withdrawn, and never able to show much in the way of emotions. I had a "good" external appearance but inside I was dirt.

Then a brotherhood of Christians in high school challenged me to give up on my way of doing things, and try God's way. I accepted Jesus Christ as my personal savior and I changed. The dirt inside of me was washed away and I was no longer alone. The Christianity that previously had meant little to me now meant everything. My inner sadness turned to joy, which I now find I can spread to others by showing them the way to salvation through Jesus.

Earl Eiland [Senior]

Even though raised in a Christian home and regular in attending church and Sunday school, I did not receive Jesus Christ as my Lord and Savior until four years ago [in 1971]. I had all of the facts rattling around in my head, but until I observed truly committed Christians and the presence of the Holy Spirit, I did not realize that Christ really had died for me, and that the Holy Spirit was available to give me strength and peace.

Ever since I accepted Christ into my life, I have found true peace, love and meaning. Every day, I walk with the Lord. He is with me, and prepared to guide my way. All I need to do is to listen and look for his leadership—and obey. I praise God for filling my empty life and for his wonderful exciting plan for me.

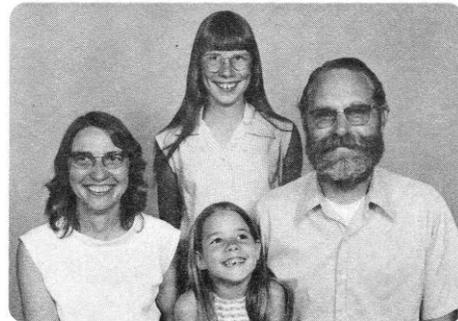


Earl Eiland

Dr. David Shortess wrote:

Although I had always thought of myself as a "good" person and had been a church member for many years, I did not really know what making Jesus the Lord and Savior of my life really meant.

In September 1968, at a Lay Witness Mission in Roswell, NM, I got a glimpse of a new life in Jesus and decided to let the Lord take over my life. I had always been number one. Since Jesus is number one, I have a new fulfillment in my work, family, and my relations with people. I praise God that I got to know him before it was too late.



Dave Shortess Family

Here is the one-page outline that Lee and I generated for the February weekend.

CHRIST IN US by Lee Gagner / Harry Briley

I. Difference Between Empty and Full

A. *Explanation of the Cup Theory (part 1)
I John 5:11,12; 4:13; Romans 10:8-10; 8:14-17; 4:4,5; Ephesians 1:13

B. *Examples of the difference
I John 2:24,25
Luke 23:39-43
I John 2:22,23; 5:10-12; Romans 1:18-25
I John 2:1,2; Romans 5:15-17
I John 1:8-10; Ephesians 2:8,9; Matthew 6:2,5,7

C. *Empty to Full, The Personal Encounter with Jesus Christ* (see footnote)
Romans 5:6-11; 8:32,38,39; John 3:16,17
Romans 3:9-10
Romans 3:21-24; 10:5-13; I John 4:15
Hebrews 4:14-16; Revelation 3:20; Acts 4:12; I John 1:9-10-20

II. Differences Between Full and Immersed

A. *Explanation of the Cup Theory (part 2)
Matthew 10:37-39

B. *Daily Christian Living

1. *Prayer: Talk Daily with God Himself
Hebrews 4:16; Ephesians 6:18; 3:8-12,16-19
2. *Fellowship: Talk with Believers
Hebrews 3:12,13; Acts 2:42-47; James 5:14-16
3. *Witness: Talk with Unbelievers
Matthew 10:32; II Timothy 1:6-8; Mark 13:9-11; Acts 4:5-12,29-31

C. *Baptism into Water / Baptism into the Holy Spirit

1. *The Initial Agreement: Vocal Assent(All Peoples)
Romans 10:8-11; Matthew 10:32; Titus 3:5-7
2. *The Signed Contract: Action by Baptism into Water(Believers Only)
Romans 6:1-6; Acts 2:37-42; 8:12,13; 9:17-20; 10:44-48; 19:1-8; I Peter 3:2
3. *The Involvement: Empowered to Live the Christian Life(Believers Only)
John 1:32-34; Galations 5:25,26; Luke 11:11-13; Acts 8:14-17

D. *"Christ-In-Us" is His Holy Spirit

1. *SINFUL: Separation, Holy Spirit Convicts
John 16:7,8; Romans 12:1,2
2. *FORGIVEN: Reconciled, Holy Spirit Comforts
Romans 4:6-8; James 4:8; John 14:26
3. *COMMITTED: Called by God, Holy Spirit Indwells
Romans 6:11; 8:5-14; 12:10-12; I John 4:11-15; I Corinthians 6:19-20; 2:10-11
4. *WARFARE: Tempted, Holy Spirit Empowers
Ephesians 6:10-17; Romans 5:1-5; 7:14-25

*Footnote: HIS Love and Desire for our Redemption John 3:16; Romans 5:8
OUR Sin and Separation from God Romans 3:10,23
HIS Forgiveness through Jesus Christ Only Romans 6:23; John 14:6
OUR DIRECT Response of active acceptance Revelation 3:20; Romans 10:8-13

The diagram illustrates the process of being 'immersed' in the Holy Spirit. It starts with a stick figure and a cup (representing the initial state or 'Cup Theory'). An arrow points down to a stick figure with a cross on its chest, representing the initial agreement or baptism into water. A second arrow points to a stick figure inside a larger container with a cross on its chest, representing the final state of being 'immersed' in the Holy Spirit.

Figure 66 - Bible Talk Outline (Briley/Gagner 2/1976)

Peritonitis

Instead speaking at that February retreat, I had a ruptured appendix the night before, which spread to peritonitis that poisoned my entire body cavity.

Any appendix malfunction is serious. I had too many encounters with death. Any encounter is too many. This near-death experience showed that I am not my own. God bought me with a great price through Jesus Christ. My life was literally in his hands.

The incredible horror began with a misdiagnosis. The doctor's dismissive handling of me left Anne bewildered. He sent me home as having constipation and had Anne give me an enema. The doctor must have thought, "*He is just a college student, not to be taken seriously. He'll get over it.*" I vomited and went back to the doctor the next morning.

He said I needed to go immediately to the hospital. Taking that as a direct order when he left to fill out papers with Anne, I stood up and slowly walked across the street by myself to Socorro General Hospital. I was none too well and someone should have escorted me. The doctor had not informed the Emergency Room of my pending arrival, so they told me to wait sitting on a lobby chair along the pale green wall.

My appendix had already ruptured and the next thing I remember was waking up in ICU with a doctor shoving hoses up my nose and down my throat. The only uncomfortable part was the nurses changing the nasal tubes that went down to my stomach. That part was definitely creepy. The peritonitis lasted some weeks with an abdominal drain tube at my belt line. My poor bride thought she would be a widow before our first anniversary.

A hospital orderly discretely remarked to me that my next stop would have been the morgue. It was that critical. He and the Christian community prayed on my behalf. The retreat provided a ready-made sound-the-alarm team call to prayer all weekend.

Maura (Kelly) Zimmerschied tells of her earlier similar appendix escapade:

I had appendicitis [two years earlier] just before finals week of my freshman year [Spring 1974]. I was trundled up to Albuquerque late at night and had surgery the next day. They did the surgery several hours earlier than scheduled because they thought it was about to burst.

My appendix rumbled every few months for several years - pain, vomiting, much worse than flu. First, it seemed to be associated with the high school cafeteria serving fried chicken. A doctor said I was just having ovulation pain and advised me to PUT HEAT ON IT (wrong!). This pain was orders of magnitude worse than ovulation twinges. My mother was told that chronic appendicitis did not exist. Once my appendix was removed, I never had any more episodes.

Your appendix thus got my immediate attention and prayers during that retreat.

Maura knew Anne from Highland High School years and both enrolled at Tech in 1973.

Throughout the peritonitis, I had an unexplained restful peace. I did not consider myself in danger. Jesus was in my boat. I had nothing to fear. I could agree with Paul, whether I lived or died, I belonged to the Lord. I must have looked terrible based upon visitor expressions, but inwardly I was fully at ease. There was peace and confidence with God, and felt oddly puzzled that the healthy people were the visibly anxious ones.

I discovered that when it is my time to die, that "*He [indeed] is able to keep that which I have committed unto Him against that day*" 2 Timothy 1:12 (or paraphrased as "*God is way awesome in the middle of a crisis.*")

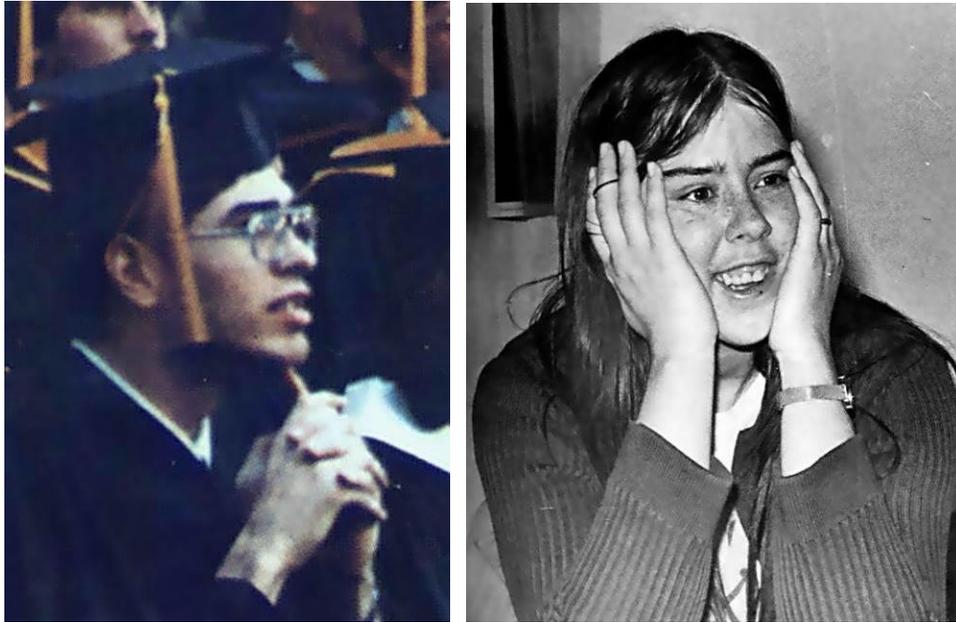


Figure 67 - Candid Shots: Harry, Anne (Yearbook 1976)

The peritonitis recovery occurred the week for campus job interviews. Anne helped me dress up (sport coat, no pants) and interviewers came to my hospital room. I did not get those jobs, but I felt confident. I could only imagine what went through their minds.

Lillie Eiland (from St. Paul UMC and mother of my groomsman Earl Eiland) took Anne under her wing at her home for two weeks while I was in intensive care. That loving act of service meant much to both of us.

MSCH Alumni Newsletter

In preparation for the 10-year reunion of the MSCH in 1982, I published an Alumni Newsletter starting in 8/1980 (no copies found), 1981 (five of six issues found), and 1982 (all four issues found). Our reunion coincided with the sixtieth Forty-Niner's weekend. The newsletters contained short letters from individuals, updated and requests for addresses, and preparation for the reunion itself. The following material appeared.

The original MCSH in 1972 had only ten people involved: Terry Asher, Harry Briley, Earl Eiland (manager), Donna French (treasurer), Mary Ann French, Ken Hill (assistant manager), Paul Jansen, Kimberly Johnston (later Eiland), David Snyman, and advisor David Shortess. We did so much with so few hands.
– MSCH Newsletter 3/1981, Vol.2 No.2

David Snyman married Sheli (Anne's roommate in the Driscoll Hall girl's dorm) and together they coached us during my own engagement with Anne. David felt and told me that I would be most effective as an active layperson, rather than as a full-time pastor.

I interviewed David in 1981 about how he decided to attend Seminary (edited):

David Snyman enjoys preaching without notes and has always been a people person. After his Sanderson Texas [yearlong] experience as a Lay Preacher and constant encouragement by the local people, he just walked into [the role]. The good experience there confirmed the previous call that God had on his life. That original call was hard because it meant breaking from a lucrative job as a systems programmer. It took three weeks of prayer to make up their minds.

The next hard decision regarded seminary since he knew about the cold deadness of faith common among seminary graduates. He chose Asbury Seminary because it was not Methodist controlled, but founded by Methodists to stand up against Modernism ("God is dead", et al). His confidence was bolstered knowing the school followed the Bible as the Word of God, evangelical, and had many Greek courses (which aided his confident preaching of the gospel), conservative, non-denominational, yet remained within the Wesleyan tradition. He prayed much about it. – MSCH Newsletter 12/1981, Vol.2 No.6

Kathy (and Bill) Cameron described how their new life in Jesus started (edited):

Bill graduated as a metallurgical engineer (12/1980) and was active in the MSCH for most of his time at Tech. I met him when he was a sophomore and I was a freshman Biologist (5/1981). I became interested in the MSCH first as a quiet place to go and later because of what people had that I wanted (but did not quite know how to find). Bill and others down there helped me find what I was looking for without realizing it, Jesus. Bill became a Christian partly because of God using MSCH people in his first semester. – MSCH 1/1982, Vol.3 No.1

Whatever Happened To

I was happily typing away about how God worked in our lives as students and then I wondered what actually has happened after 40 years. Many people appear in this chapter. Some became life-long friends but half dropped off my radar.

The closest I have seen anything like the 1970's Tech revival is the revival that started before 2003 in Reading, England at Grey Friars church (Anglican). The evening service had standing room only with no one over age 35. This long-term revival in Reading pulled from students at the nearby college. The people were fervent and counter-culture conservative in a liberal diocese. Bible readings came from the heart, and it felt like a "let's-put-our-faith-into-practice" crowd. When I reported this anomaly back home, no one believed me since the media said the church in Europe was dying with no youth.

I wanted to know how each person's faith walk managed after four decades. The collected results varied as it did with my high school friends. Most if not all of these started unashamed and openly vocal about their faith in Jesus, but some became quiet about it, recanted, or took on a non-traditional form of faith. This core of 63 students (out of 800) represented the known self-identified campus Christians between 1970 and 1976.

Divorces, health issues, children who failed to launch, and deaths of family members affected many of the families in this sample population. I could not predict their response to these tragedies. The same tragedy in one family spun off a person away from faith, while in another family; faith preserved them within the storm.

I am not quite writing about the preservation of the saints or eternal security. As a diagnostic (updated 2018) with such a small known population, and forty years history, the continuity of faith begs this minimal tally and a follow-up research project.

As mentioned, the self-identified Christians were less than 8% of the student population. This excludes the adult faith mentors noted earlier. I lost contact with 29 of the students.

The metrics for the remaining 34 students (54% sample of the target population)

- (82%) 28 Openly follow traditional faith (Liturgical, Evangelical, Pentecostal)
 - 19 remained public in their traditional faith expressions
 - 4 died far too early in their active faith
 - 2 non-believers in the mix became an active believer 10 years later
 - 3 list themselves as active in traditional faith but are not in contact
- (6%) 2 became life-long Unitarians
- (12%) 4 dropped all public evidence of any faith talk

With such a small sample, a miscount of one person is an error factor of 3%. I sense that the uncounted 29 students would lean more towards silence about their faith.

The Episcopal Church in Socorro was severely lacking in 1973, which was how we snagged Anne because her Episcopal Church in Albuquerque was spot-on Biblically and she did not find the same case in Socorro. Thus, she joined the MSCH crew instead.

However, Robert Heid reported in 2014 that a flip-flop somewhat occurred.

Paul Shoemaker was an atheist friend. He visited us at the Brothers House once (or maybe the MSCH), and I prophesied that he would come to a need of the Lord. It happened about two years later. He is active as a Tech alumnus and connected with the Episcopal Church on Leroy Place, where he visits frequently.

On my 49ers Celebration visit, he invited me to join him at their church Sunday morning, where he introduced me as "my friend who led me to the Lord." A fair number of people were there, some students, nice enough. I saw no particular [special] evidence of the Holy Spirit.

I visited Socorro again in 2012 and went to St. Paul's UMC. I saw Betty Houston, and the rancher who would bring the water trough to church for baptisms. They have a good pastor, but the congregation is almost entirely women, middle aged and older. I would say there were about 20 to 25 there. No men and no kids.

As the MSCH and Wesley Foundation crews moved onto their separate careers, I lost contact with about half of the community. Some Tech couples taught or worked at Fremont Christian High School in the California Bay Area in the late 1970's.

Soon, all moved to far less costly mid-western communities. Some chose Indiana where Robert Heid grew up. Salem and Floyds Knobs sit within corn/soy farmland and dense woodlands having poison ivy undergrowth. Business commuters from this limestone area of southern Indiana drive an hour across the Ohio River to Louisville, Kentucky.

Robert Heid reported about that southern Indiana contingent in 2014:

Paul Jansen [from our Grand Canyon treks] suffered kidney damage (perhaps by high blood pressure) and is on dialysis. He is doing okay but not great. He and my sister [Sherry, in Floyds Knobs,] have been married for 40 years!

Owen Shilling lives in our neighborhood, along with his children and grandchildren. He is an elder in the church that sponsored Portland Christian School [in Louisville], where [my wife] Brenda and I both taught.

We see Michael and Heidi Hawley all the time, mostly at church. [They live over in Salem.] Heidi has been midwife for several of our grandchildren.

Michael gets back to Albuquerque and Socorro once or twice a year, and keeps in contact with Steve and Shirley [Edwards] Cave, Scott and Irma [Edwards] Reeder, Steve and Ruby [Edwards] Hunyady. [The Edwards family lived in Socorro and attended St. Paul UMC.] He visited Lee Gagner in Arizona in 2014.

Robert Kirby and I traveled together to Genny Gagner's funeral in 2008.



Figure 68 - Tech Grandfathers, Floyd Knobs, IN - 6/2016
(L-R: Self, Owen Schilling, Paul Jansen, Michael Hawley)

Their extended families, now in their third generation, have thrived as neighbors in the conservative Amish/Mennonite farming regions. That might explain the beards! They home-schooled their children and those children are home schooling the next generation. The academics have been sound because some have since graduated from New Mexico Tech and other colleges. Children bent on farming have purchased nearby acreages.



Figure 69 - Michael and Heidi Hawley, Salem, IN - 6/2016

Heidi is a lifelong mid-wife, but Indiana instituted new rules requiring more on-line certification classes for 2015-2016 and volunteering in clinics to build up intern hours.

The Manzano High School website listed the obituary for Terry Asher.

Terry Robin Asher, 62, passed away after a short illness on 8/2/2016. He was born on 1/11/1954 in Fort Leavenworth, KS, and moved to Albuquerque in 1958. Terry developed a strong appreciation for math and science. He graduated from Manzano High School in 1971, and earned his BS in Microbiology at Tech.

Terry was a particle accelerator operator at Fermi National Accelerator Lab for 25 years in Aurora, IL. He spent much time learning high-energy particle physics from world-renowned experimenters, and wrote an operation manual for the massive machine. He volunteered as a docent at the Field Museum in Chicago.

Terry's interests included geology, astronomy, photography, and music. He took classes at Santa Fe Community College after retirement. His parents were Joetha and Arlen Asher. An informal service occurred 8/6/2016 at the Unitarian Universalist Congregation of Santa Fe.

Anne wrote in a Bible Study workbook in Livermore (undated):

Q: Who have been effective Christian witnesses to you?

A: *Sheli Snyman* [Tech - roommate]
Helen Thurmond [unknown source]
Father Charles Fish [St. Mark's on the Mesa Episcopal]
Constance Jones [Tech]
Kimberly Eiland [Tech, d.2019]

Cost of Living	1971	1976	Increase
Average Home	\$25,250	\$43,400	1.7x
Average Income	\$10,600	\$16,000	1.5x
Average Monthly Rent	\$150	\$220	1.5x
Gasoline (per gallon)	40 cents	59 cents	1.5x
Data: www.thepeoplehistory.com			
Average Home	\$42,500	\$54,750	1.3x
Average Income	\$9,111	\$10,157	1.1x
Average Car	\$2,700	\$4,100	1.5x
Milk (per gallon)	1.32	1.42	1.1x
Data: www.inthe70s.com			
Average Home	\$28,300	\$48,000	1.7x
Average Income	\$9,028	\$12,686	1.4x
Gasoline (per gallon)	36 cents	49 cents	1.4x
Milk (per gallon)	1.18	1.65	1.4x
Data: www.1970sflashback.com			

Table 2 - Cost of Living (Different Sources)