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NOVA: The University of Texas at El Paso Magazine

The News Service, University of Texas at El Paso

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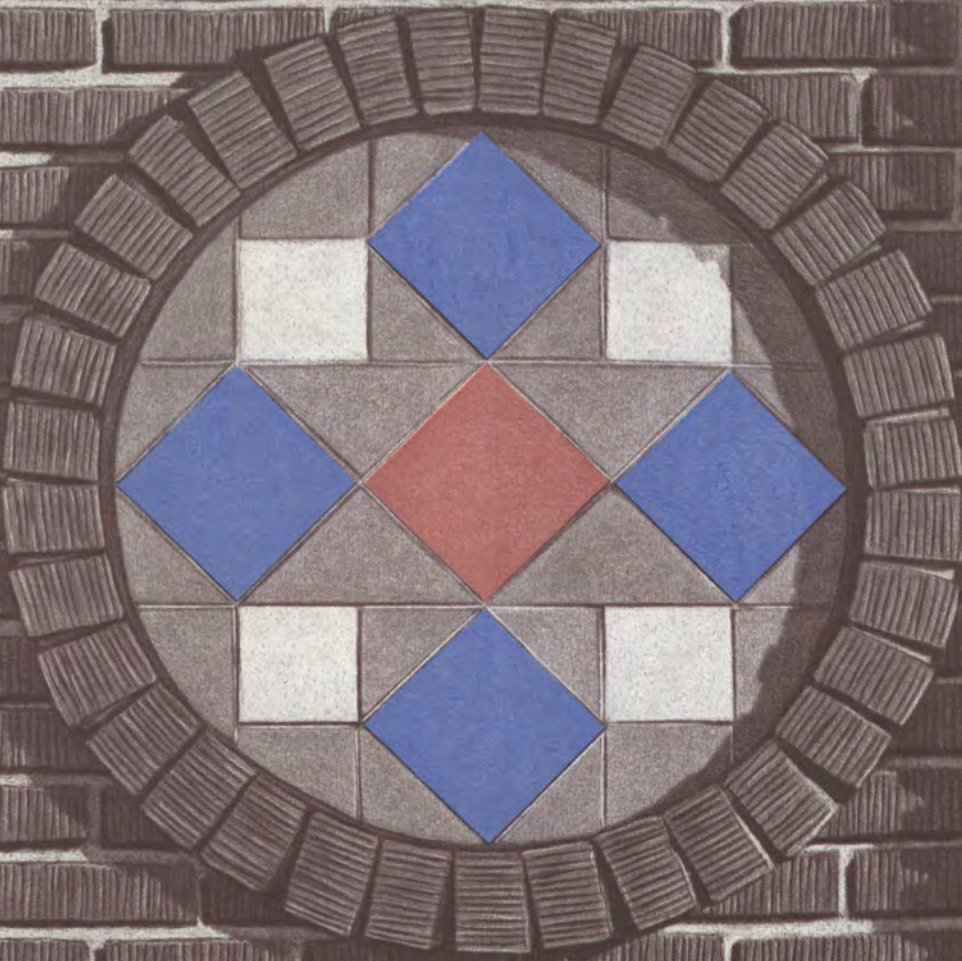
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NOVA

The University of Texas at El Paso Magazine



Mandalas and Wheels

Teeco

The View from the Hill

Valentine's Day, 1981: The El Paso *Herald-Post* reported on the free income tax clinic conducted by the UTEP Department of Accounting. The tax service, located in the El Paso Lighthouse for the Blind, was open through April 15 "as a social service for all handicapped and needy people," and was a project of UTEP accounting students, supervised by professionals within the department.

Valentine's Day, 1982: The El Paso *Times* told of the parents of two autistic children who complained that the special education programs in El Paso were inadequate, more "babysitting" than educational. The parents, said the *Times*, "praised the special education clinic at The University of Texas at El Paso," and that the two autistic children attended the UTEP clinic several times a week "and their parents said they think the two have made more progress there than in the special education programs in the El Paso school district."

Now, since there is no controversy, conflict or mayhem in those stories framed by the last two Valentine's Days, they didn't get a lot of attention. Neither, I am certain, appeared on the 10 p.m. TV news, probably because the six-car collision on the Interstate, the report from the murder trial, and the other perpetual, obligatory laundry list of dire news from home and abroad preempted the time.

But whether it is mentioned in that microscopic item abutting the classified ads and just above the crossword, or not mentioned at all, it is good to know and worth remembering, that UTEP does things for its community — most of them barely sung or unsung.

A quick leaf-through the clipping book between the two Valentine's Days is an eye-opener in this regard. Here are a few items noted, out of the many that could be cited:

- In February, a workshop with the Universidad Autonoma de Mexico on Mexican monetary policy and economic development.

- In March, an Engineering meeting on campus to promote industrial development in the El Paso-Juarez vicinity.

- In April, the Modern Languages Department sponsors the "Poetry in Motion" campaign on city buses.

- In May, Chicano Heritage Month; kindergarten classes being held in Edu-



cation; a pollution studies meeting between UTEP and the University of Juarez.

- In June, a bilingual education conference; the "Future Pass Symposium"; report on pesticide studies on the border.

- In July, beginning of an ecological study of the desert to find more efficient agricultural use of the land; a Sports Medicine Workshop; a program on aging and mental health.

- In August, Women's Equality Day; a program on standards for employing nurses with foreign educations.

- In September, a conference on "The Investigation of Form and Function in Mexican American (Chicano) English"; a junior scholars program; formation of the Elenco Experimental Bilingual Theater at UTEP; National Hispanic Week broadcasts; basketball tournament for International Year of the Disabled Person; University Inter-scholastic League conference on campus.

- In October, a seminar in economics; another on effect of illegal Mexican workers; a College of Nursing program on teenage pregnancy.

- In November, a bilingual education conference; a presentation on water cooperation by the UTEP Inter-American and Border Studies office; tests conducted by engineering students on air pollution at border crossing points.

- In December, "Historias para ser Contadas" opens on campus, performed by the UTEP Elenco Experimental; first fall Commencement held with Rep. Richard C. White as speaker; "Nut-cracker" ballet opens in Magoffin.

- In January, conference for Texas Teachers of English to Speakers of Other Languages; nursing seminar on "Law Every Nurse Should Know"; a "Secondary Basic Skills Institute" held in College of Education; UTEP participation in the El Paso Crime Prevention Committee.

With one or two exceptions, I didn't make notes on the cultural events open to the public — art exhibits, museum displays, dramatic and musical performances, literary readings, and the like, nor of athletic events, nor individual efforts whereby a faculty or staff member at UTEP helped organize a conference or participated in a professional meeting downtown, nor of the hundreds of examples of UTEP faculty, administrators and staff members who gave speeches, talks, workshops, advising sessions, and expertise every year to professional, civic, historical, educational, social, charitable and other El Paso organizations.

Next time you see the 60-column-inches given over to a "controversial" resignation of a coach or dean, or the two-minute TV news story on the Crisis for Today at UTEP, remember some of the things UTEP does, daily, that would not be done were the institution not here.

—DLW

March 1982 NOVA

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Cover: Brick-and-tile detail from Bell Hall reflecting the *Mandala* of Lamaism, used to "invoke the deities." Art by Vicki Trego.

Back Cover: Work continues on the Sun Bowl, expanding the stadium from 30,000 to 50,000 seats in a \$6 million project.

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The University of Texas at El Paso, located on the Western foothills of the Franklin Mountains, has been serving the community and the Southwest since 1916. Currently, there are about 15,000 students enrolled in the University's six colleges and Graduate School. Like any other institution in the University of Texas System, UTEP strives for a mark of excellence among its staff and students. However, unlike any other campus in the Western Hemisphere, the University boasts a Bhutanese style architecture that is rich with culture, history, and symbolism.

Kathleen H. Worrell, wife of the first dean, is usually given credit for inspiring the campus architecture. It was during one of her many travels through the pages of *National Geographic* that Mrs. Worrell discovered Bhutan, and based perhaps on fancy and whim, she suggested that the new campus buildings be adapted from the pictures which appeared in the April, 1914, *Geographic* article entitled "Castles in the Air, Experiences and Journeys in Unknown Bhutan." The article, written by John Claude White, included over 70 photographs taken by the author.

At the time the University was first built, little was known about the tiny, Himalayan kingdom of Bhutan. Little did anyone know that what was being built on the Franklin foothills was a replica of a Bhutanese *lamasery*. Not only was the architecture adapted, but also many symbolic objects of Buddhist worship.

Dale L. Walker, director of the News and Information office at the University, has conducted an extensive ongoing investigation on the architecture of the University. His "The Lamaseries on the Hill: The Bhutanese Architecture of UT El Paso" (NOVA, August-October, 1971) explored the history of the University, characteristics of Bhutanese architecture, and a history of Bhutan. It was a most revealing report but although Walker briefly pointed out the ornamentation of campus buildings, no investigation has been undertaken to identify the various ornaments and explain their symbolic meaning.

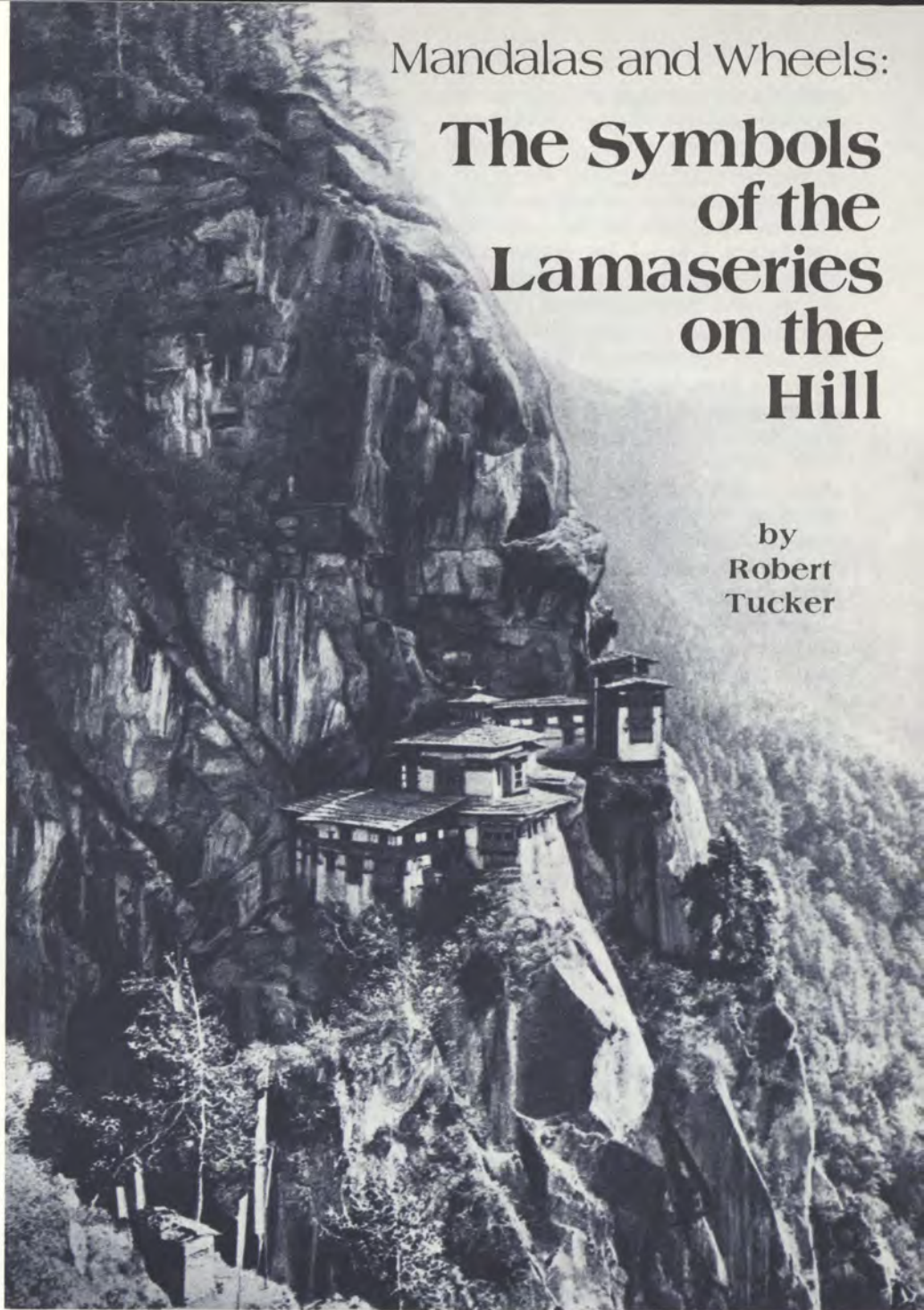
Investigation has revealed that the ornaments are in fact identifiable and that the ornamentation of buildings on the campus of the University of Texas at El Paso are symbolic with origins in the Buddhist religion of Bhutan and Tibet.

One outstanding feature of many of the older buildings on campus — such as Old Main, Worrell Hall, and

Mandalas and Wheels:

The Symbols of the Lamaseries on the Hill

by
Robert
Tucker



This cliff-side monastery is perched on a perpendicular cliff in Bhutan. Photo by John Claude White, *National Geographic*, April, 1914.

Benedict Hall — is a band of red brick adorning the uppermost level. The band is the lone hallmark which indicates the buildings as being religious institutions. In a letter to Dale Walker, Desmond Doig wrote in December, 1967, "The ornamental band distinguishes religious buildings in Tibet and Bhutan as monasteries, chapels and such. . . . Should the inmates of the El Paso university ever be told how close they are to monastic living?"

Besides the ornamental band, the older buildings also have a mosaic decoration that flanks the windows on the upper level. The mosaic designs are de-

fined with a circular confine. This follows the pattern of most Buddhist icons which, in the Tibetan language, are commonly known as *Mandalas*.

The *Mandalas* of Lamaism are primarily used to invoke the deities. Those deities invoked are depicted in the *mandala* by means of Sanskrit symbols or Lamaistic representations of the gods. However, not all *mandalas* achieve this purpose. Blanch Christine Olschak, in her book *Mystic Art of Ancient Tibet*, explains other purposes of the *mandala*: "The individual representations range from the so-called cosmic *mandalas*, which transmutes the ancient knowl-

edge of development to the universe and the world systems, to those which represent a high point among Tantric *mandalas* dedicated to meditation."

Those *mandalas* adorning UTEP buildings also follow another basic form (see figures 1 and 2 for comparison). Within the center of the *mandala* is a defined area representative of the Buddha. "The outer form of these so-called holy circles is a geomantical diagram, a *Yantra*," says Antoinette Gordon, an authority on Lamaistic iconography. The *Yantra* is composed of eight defined sections. The four sections that point to the directions of the compass are representative of the deities that protect and guard the Buddha. These four sectors are also known as the four cardinal points.

The other four sectors of the *Yantra* are representative of various gods as chosen by the artist of the *mandala*. It is through the deities represented in these four sectors that intercessions are made. By meditating on the *mandala*, Buddhists believe they are able to achieve a level of consciousness by which they may attain their worldly and spiritual goals.

Another interesting detail of the University's *mandalas* are the colors employed, colors typically used to represent Tibetan deities. The main colors of the *mandalas* — red, yellow, and blue — as Lawrence Waddel comments,



Above: Mandala on UTEP's Bell Hall;
Right, typical form of Tibetan mandalas.

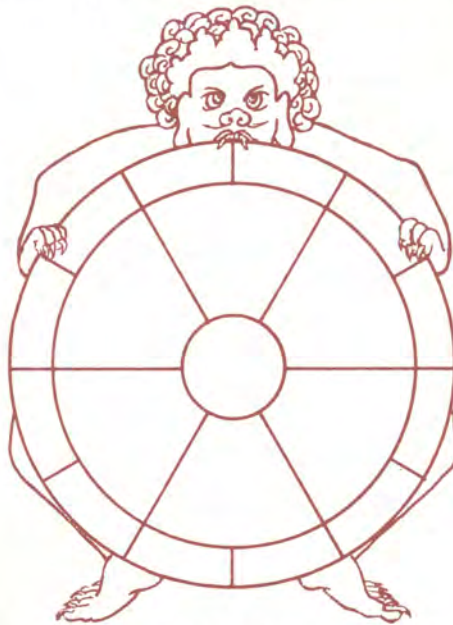


"represent the spectrum colours of the rainbow, which separates sacred objects from the material world."

Another type of *mandala* that adorns University buildings is the "Wheel of Life" or *Srid-pahi-hKhor-lo*. Two such wheels are embedded in the red brick

band above the main entrance of the Psychology Building. Since 1951, when the building was first constructed, the wheels have been described as "target-like formations." This type of *mandala* can be found in the photographs of John Claude White on page 397 of his article "Castles in the Air."

The Wheel of Life is composed of three concentric circles and although each circle has a meaning independent of the other, the three combined depict graphically an evolution of changes present in life. Blanch Christine Olschak best describes the nature of the wheel when she says it "illustrates in a popular way the essence of the Buddhist teachings, the four truths: the existence



Buddhist "Wheel of Life"; shown holding the Wheel is the Lord of the Dead.

of earthly suffering, its origin and cause, the cessation and prevention of misery, and the path to salvation from earthly suffering."

The center of the *mandala* depicts the roots of man's evils. In the Buddhist drawings, the three vices are depicted by a pig, a serpent, and a dove representative of ignorance, anger, and desire. In Buddhist teachings, each of the three vices is equally detrimental. However, Marco Pallis points out that "In reality, ignorance is the only fundamental vice, for neither of the other two could occur without it." The three vices depicted are the cause for the second ring. Disregarding any of the evils sets the second wheel in motion.

The second wheel of the Wheel of Life, divided into six sections, or *Gati*, represents the possible forms a being may pass into. L. Austine Waddel, authority on Tibetan Buddhism, enumer-

ates them in the order of their superiority: "...the gods, trojans, man, beasts, tantalized ghost and hell." The gods, trojans, and man are situated on the upper half of the circle; beasts,



"Wheel of Life" on UTEP's Psychology Building.

ghosts, and demons of hell find their position on the lower half. "Existences in the first three worlds is considered superior or good, and in the last three inferior or bad."

Gods in this Buddhist representation are different from Christian concepts. In the Buddhist religion, the Buddha has reached the ultimate form. The closest form any other being may attain is that of a god. Marco Pallis writes "The gods here referred to are not immortal and self-sufficient deities, but simply beings occupying a degree higher than ours, possessed of wider powers than man's, such as longevity, unfading beauty, and freedom from pain, except at the last when they are about to cease from being gods and turn into something lower, for then their charms begin to wither and their fragrance turns to stench so foul that their goddess-wives flee from their presence."

The trojans occupy the region between man and the gods. They are depicted as "sort of supermen, more powerful than ourselves, but portrayed as warlike and ambitious. . ." says Pallis. The trojans are a very disgruntled group as they are caught in a limbo where they are superior to man, yet inferior to the gods.

Man is simply the existence most beings occupy. There is nothing dishonorable about being man. However, it is from this state that most should attempt to evolve into a higher state of being. The disgrace and danger lies in evolution into one of the lower forms.

The first state below man is animal or beast. This is an undesirable state due to the fact that escape from its bondage

is almost impossible. "Animals are creatures for whom the gaining of their daily food is dominant care, so that they have little leisure to spare for higher things. Their intelligence, too, operates as a rule within a restricted circle," Marco Pallis says. Although it appears that this is the lowest state a being may attain, a state in which evolution into a higher form is hampered by desire and lack of intelligence, two other regions exist.

The region of the tantalized ghosts is yet another limbo state. The picture described by Pallis is so vivid that no other words can quite capture the state of the ghosts or *Yidags*. Ghosts "are pictured as having huge bellies, but pin-point mouths, so that their hunger is insatiable, their power of satisfying it is minute. When they drink, the water turns to liquid fire inside them; when they eat, the food swells like uncooked rice and brings on an acute colic." Ghosts, as pictured here, appear to be the most hideous beings possible. In Buddhist teachings, however, these demons are not creatures of the mind, but live beings that inhabit the earth.

Finally, the existence in hell is the lowest form. The beings there cannot be described as they are an intensification of ghosts, beasts, and all other hideous demons of a lesser degree. Although it may seem impossible to pass from this state, Marco Pallis writes that the "inmates of the purgatories are not deemed incapable of good impulses, and even the devils — that is to say, beings who have sunk into a state of utmost malignancy — are able to rise in course of time."

The outer ring is a representation of the life of Buddha. It is from this ring that the ways to a better existence may be found. Waddel writes, "And outside the wheel is a figure of Buddha showing that he has escaped from the cycle to which he is represented as pointing the way of escape." The outer ring is composed of twelve joining links. In order to pass from one state to another, as depicted in the center ring, the being must pass through the cycles shown by Buddha. Generally, the being must pass in the given order; otherwise, the being remains trapped in the cycle. The usual order, as taught by Buddha, is as follows: unconscious will, conformation, consciousness, self-consciousness, sense, contact, feeling, desire, indulgence, fuller life, birth, decay and death. This evolutionary process appears self-explanatory; however, the meaning is much more complex and requires a better understanding of Bud-

dhist philosophy.

Other symbolic ornaments adorning the campus of the University are large, cylindrical urns flanking the entrances of the Centennial Museum and the old section of the Student Union Building. These urns were considered mere ornamentation for over 30 years until Desmond Doig identified the cylinders as being patterned after Bhutanese prayer wheels. The prayer wheels, though seemingly simple in nature, are quite complex and very symbolic.

These wheels, usually located at the entrances of holy places such as shrines, temples, and chapels, are also known as *Mani*, *Khorten*, and *Mani chos aKhor*. The wheel is simply a cylindrical drum set upon an axle to accommodate rotation. Contained within the exposed



Centennial Museum prayer wheel.

drum is another cylinder or *mani* on which strips of paper are attached. The inner cylinder is connected to the outer drum by means of a gear; this inner drum usually rotates in the direction opposite to that of the outer cylinder. Most of the prayer wheels are kept in constant motion by monks, lamas, and laymen; it is not uncommon for the wheels to be turned by mechanical means such as streams of water, steam, and animals.

Written on the papers contained within the cylinders is a six-syllable prayer, *Om Mani Padme Hum*, which translates from Sanskrit into "the jewel in the lotus" (the lotus is a symbolic reference of Buddha). Usually, a single prayer wheel will contain one thousand

or more slips of paper inscribed with the prayer. L. Austine Waddel remarks that "The prayers are chiefly directed to the devils, imploring them for freedom or release from their cruel afflictions, or they are plain naive requests for aid towards obtaining the good things of this life, the loaves and the fishes." Though it may seem that the cylinders are turned for the selfish means of salvation, John Claude White notes that "The prayers are believed to be prayed for the benefit of the builder of that particular wheel and counts so much to his credit."

The invention of the prayer was a revolutionary concept to the Buddhist. The Buddhists simply employed a mechanical means to increase the power of the prayers being offered. It was believed that there was special merit in the ability to continually keep one of the wheels in motion; it was equally commendable to be able to write out the sacred prayer. By placing thousands of the prayers in the drums, each revolution of the drum would constitute praying each of the prayers. In order to insure that the prayers were offered in a proper manner, regulations were established. The prayer wheel had to be turned slowly, and from right to left. The slow motion would help focus concentration on the movement of the wheel; movement from right to left caused the inner *mani* to turn in the direction of the writing — left to right.

Ornamentation of the buildings at the University of Texas at El Paso is rich with symbolism. Each ornament — red brick bands, *Mandalas*, wheels of life, prayer wheels, and others — offers an insight to the religious beliefs and teachings of Buddha. And although the buildings have affected the lives of those who pass through them, they seem to remain strange, misunderstood, and dead in this land where Buddha is unknown and Christian beliefs dominate. After more than 60 years, research is being conducted to reveal the symbolic meaning of ornamentation, its architecture, the land from which it came, and to a certain degree, the woman who inspired the style of the great institution.

Like a large jigsaw puzzle, the pieces are being fitted together. □

(Selected Bibliography on page 14)

Editor's Note: Robert Tucker ('79 etc.), owner of Craft and Hobbie World in El Paso, was a Civil Engineering major at UTEP when he wrote this article as a student in English 3112. He acknowledges the help and inspiration given him by Carlene Walker and Penny Byrne of the English faculty and thanks Sue Wimberly, News Service secretary, for her help in locating research materials on the campus architecture.

ON THE JUNEAU ICEFIELD

When a desert arroyo is filled in for construction, the next cloudburst may wash it back to its original contours. A bridge built over a dry wash may fall victim to a desert rainstorm that carries away its supports.

The place to attack these problems may not appear, at first glance, to be an Alaskan glacier, but that is just where Richard A. Marston hopes to learn important clues about the behavior of streams. He then can apply this information to the way water runs through desert arroyos and other places where engineers need to be able to predict stream behavior.

Dr. Marston, who is assistant professor of geological sciences at UT El Paso, spent seven weeks last summer as a member of the staff of scientists for the 22nd Summer Institute of Glaciological and Arctic Sciences. He traveled, mainly via cross-country skiing, through the Juneau Icefield to the Atlin Lake Region of the Canadian Yukon.

"My interest in going there," he explains, "was to study streams that develop on top of glaciers, known as supraglacial streams. They cut channels in the ice and change much faster than normal streams on earth material. I was looking for clues as to how normal streams develop and shift channel locations. Although they have some differences from other streams, there are many important similarities."

The way a stream channel shifts on a glacier, he says, is very similar to the movement of meandering streams, the kind that trace ox-bows along the countryside. By studying the shifting of channels, he hopes to gather enough information to be able to predict where a stream can be expected to flow under given conditions.

"No one really knows why streams bend," he adds. "That's why I'm looking for an analogy."

Besides his own research on stream behavior, the party of scientists and students examined many other aspects of glacier life. One of the main purposes of the program, says Dr. Marston, is the study of glaciers as possible water supply sources, since glaciers and ice fields hold 75% of the world's fresh water.

Over a period of seven weeks, he traveled across the ice field to Canada, moving from one camp to another. Most of the camps set up by the institute have at least one permanent structure with a sleeping area, kitchen, and generating equipment for electricity.

"We had no days off," he recalls. Generally the day started at 7 a.m. with travel or research activities. In the evenings the scientists usually lectured to their small groups of co-workers. The day ended at 11 p.m.

Before starting across the ice field, each participant had to learn mountain climbing techniques and safety procedures.

"There has never been a death on the ice field in the 35 years of this program," Dr. Marston says. "The biggest danger involves rescue from crevasses. One person's weight may break an archway of ice. The others — they are roped together in fours — must be prepared to help get the fallen person out of the hole. Walking with a full pack on your back, you fall forward. Just about everybody falls into a hole sometimes, but usually just waist high in snow."

The other danger, he says, is from hypothermia. The temperature rarely drops below freezing in summer, but the terrain is always wet. "If you don't keep your body dry and the wind picks up,

the body temperature falls rapidly. We had no cases of that last summer, fortunately."

Snow blindness also can affect workers in the ice field. In 1980, when he spent three weeks at the western edge of the ice field, Dr. Marston acquired special sunglasses. That fall, upon moving to El Paso from Oregon, he found the glasses helped him adjust to the unaccustomed glare of the desert sunlight.



Geology Professor Richard Marston shows on a sand table how a stream finds its course.

Every summer, as the glacier begins its summer thawing process, Lake Linda forms, draining under the glacier to etch out a cave, says Dr. Marston. "The weight of the ice squeezes out the air and the ice turns blue, then black. Inside the cave, the black ice is about 2,000 years old. You can't tell how far you are seeing into it. The temperature is always right at freezing. In little pock-



Gilkey Glacier, Alaska.

ets in the ice, where cold air is trapped, sublimation crystals are formed. They look like a million diamonds — the most spectacular sight in the ice field. If someone spread out a million real diamonds in front of me, I'd still prefer the sight of those crystals."

The Juneau Icefield Research Program dates from 1946, and the Summer Institute of Glaciological and Arctic Sciences from 1959. The institute is supported by the University of Idaho, the National Science Foundation, Foundation for Glacier and Environmental Research, and the Juneau Icefield Research Program. The head of the re-

search program since the beginning has been Dr. Maynard M. Miller, dean of the College of Mines and Earth Resources, University of Idaho at Moscow. Members of his summer staff include biologists, geologists, geographers, meteorologists and others interested in research on glaciers and the environment.

Students who are accepted for the program are able to work side by side with top researchers in the field and also may earn academic credit through the University of Idaho.

"I would like to have a student from UTEP take part in this work," observes

Dr. Marston. "It is a tremendous learning experience, but it is also very expensive unless the student can have some kind of scholarship help."

Dr. Marston has been invited to return to the glacier country this year, along with his wife who has been asked to help with the Juneau radio contact station for the scientists. "People in the field check in by radio at certain times daily. That way, we can keep track of their progress and be sure that they are all right."

Meanwhile he is continuing his studies of stream channels in the hope of unlocking some of their riddles. □



I have always loved bicycles. They were magnetic, attracting me as a moth to a candle. I always had some kind of wheeled vehicle, starting with a tricycle in New Canaan, Connecticut, in about 1936-37. I can still remember the very moment that my body learned to connect lean-and-steer, which along with the bicycle's natural geometry makes the machine maneuverable.

I didn't ask so many questions then about how it all worked, but I was seduced from the start by the elegant simplicity of the bicycle. As a result of this life-long fascination, I decided several years ago to give up my career as an aerospace scientist and engineer and to open a bicycle shop. This gave me the opportunity to become more involved in research on human-powered transportation, which in turn led to my serving as president of the 550-member International Human-Powered Vehicle Association.

My aerospace industry career began with graduation from Texas Western College in 1960 and proceeded through the Autonetics Division of North American Aviation to Lockheed. My interests, however, tended toward the simple — aircraft rather than rockets, gliders rather than aircraft, and balloons rather than gliders. When a work-related transfer about 1969 took me to Lockheed Burbank, with a 100-mile round-trip to work daily, I began to explore work options. In 1974 I quit Lockheed and started a bicycle shop, beginning a close association with people who were into cycling, human power, and soft energy paths.

I met captains of the bicycle industry — engineers from Cycles Peugeot who

worried about colors and profit margins, and others like John Rakowski and Jack Lambie who cycled around the world, John Howard who won bicycle races, and John Kucharik who told of racing bicycles in the 20s and 30s. I had seen bicycles-built-for-two before, but tandems weighing less than 50 pounds with 18 or more gears? Pulling trailers with kids? On vacations? Unbelievable!

I didn't know it at the time, but a page was already being turned in the realm of human power. Chester Kyle, professor of mechanical engineering at California State University in Long Beach, and Jack Lambie, aerodynamics consultant from Orange, California, had organized the first International Human Powered Speed Championships, held April 5, 1975. Phil Norton built a streamlined fairing (structure designed to reduce air resistance) out of wood strips and clear mylar and took the fastest time of the meet, 44.87 mph for 200 meters. The fastest 200-meter speed until that meet was about five mph slower, indicating that aerodynamics alone can make this already efficient machine even more so.

Through 1975 and 1976 I attended meetings from which the International Human-Powered Vehicle Association emerged, an organization dedicated to the advancement of human-powered transportation. Chet Kyle gathered an international board of directors headed by the world's best known bicycle racer, the Belgian Eddy Merckx. When we started in March 1976, I was elected treasurer and have been active in some

way ever since, serving recently as co-president with Dr. Paul MacCready.

The International Human-Powered Vehicle Association (IHPVA), incorporated in California, has about 550 members of whom more than 70 live outside the U.S. in Canada, England, Germany, Israel, Holland, Italy, Switzerland, Australia, Belgium, Sweden, Japan, Scotland, Austria, Finland, Malaysia, South Africa, France, Brazil and Sri Lanka. The IHPVA is dedicated to the creative advancement of human-powered transportation in any mode, and has subdivisions for movement on land, air, and water.

The recent explosion in innovative bicycle (or human-powered vehicle) design is a direct response to the efforts of the IHPVA, which encourages and rewards the designers. It has long been known that at bicycle racing speeds of 25 mph or greater, about 90% of the effort to produce that speed is used to push the air out of the way. Early efforts at streamlining were not popularized, due in part to the refusal of the International Cycling Federation, the sanctioning body and keeper of cycling records, to recognize records set using machines of unconventional design. Since 1975, the IHPVA has organized and sanctioned at least one showcase event per year at which creative human-powered vehicle designs appear in competitive events. The number of entries has grown from 14 in 1975 to 62 in 1980, and speeds have increased from 44.87 mph to 62.92 mph.

Dr. Paul MacCready is the creator of the Gossamer Series of human-powered aircraft and, more recently, the Solar Challenger, an aircraft deriving its propulsion directly from the sun. We first met during the early organizational meetings, when he was a glider pilot of national renown. Most everyone in aviation had heard of the Kremer Prize of \$87,500 to be awarded for the first one-mile figure-eight flight entirely under human power. Paul was a bit secretive

The Human-Powered Path

by Peter Boor

about his developing Gossamer Condor, since teams in Japan and England were also vying for aviation's largest prize. Then, a week after the prize-winning flight on August 23, 1977, I was privileged to attend the celebration breakfast where Bryan Allen and others flew the Condor, that beautiful symbol of man-powered flight that now hangs in the Smithsonian Institution. Paul's continuing contributions to this field include establishing coordinated rules for man-powered flight with the Federation Aeronautics International (FAI). Some day the IHPVA may hold a meet for man-powered flight enthusiasts, but to date there seems to be no competition for the Gossamer series. The latest man-powered flight records are, of course, held by Paul MacCready and Bryan Allen, who flew the Gossamer Albatross 22 miles over the English Channel in two hours, 50 minutes, to win Henry Kremer's second prize.

In his lectures and visits around the world, Paul is quite candid about the impracticality of man-powered flight. It is a fun sport and demonstrates what can be accomplished without brute force. The practical side of man-powered transportation comes in its use on land, where the IHPVA has played its greatest role in encouraging innovative design.

In the organization's early days, the emphasis was on speed. For those of you who are only casually familiar with bicycle racing, I need to explain that traditional bicycle races are contests between individuals; hence, no rider may use devices that give him undue advantage. Any race, especially on a velodrome, is won by the first rider across the finish line, at whatever speed. Speed measurements are made at velodromes by timing the rider through the last 200 meters. It is common to see a match sprint, where two riders start, play "cat and mouse" for two laps of the 333-meter track, then explode in the sprint for the finish when they are timed

over the last 200 meters. For comparison purposes, the IHPVA also times over 200 meters. The fastest 200-meter speed for a standard racing bicycle was 42.2 mph achieved by Antonio Maspes of Italy in 1962 (sprint from a flying start). The first IHPVA championships in 1975 at Irwindale Raceway clocked 200-meter speeds of 44.87 mph (multiple) and 44.69 mph (single). The present records, set at Ontario Motor Speedway, are 62.92 (multiple) and 58.64 (single). This increase is essentially due to aerodynamics, something that standard bicycles aren't allowed to pay attention to.

Other records held by IHPVA members are 47.96 mph for 500 meters, 41.20 mph for 1,000 meters, and 40.63 mph for one mile. If this does not mean much, try this record: A streamlined tandem rode the 42 miles on Interstate 5 between Stockton and Sacramento in 49 minutes. That averages over 50 mph for almost an hour. Try that on your best 10-speed!

The years at Ontario Motor Speedway were exciting ones for IHPVA, the flat terrain meeting requirements for setting records. All the existing 200-meter speed records were set there and we pioneered a race with a Le Mans start, where riders, on signal, sprint from one side of the track to their vehicles on the other side to start the race. There was also a flat oval for testing how far human-powered vehicles could go in one hour. The existing record, recognized by International Cycling Organizations, is 30.7 miles, set in 1972 by Eddy Merckx. In a streamliner (Vector No. 24 single), Eric Edwards rode 36.94 miles, and the tandem Vector No. 25, with Ron Skarin and Eric Hollander aboard, went 46.3 miles.

The Ontario Motor Speedway is no longer available, having been torn down by a land development company.

Events involving HPVs have been covered on such TV shows as "You Asked For It," "CHiPs," "That's Incredible"

and "Real People."

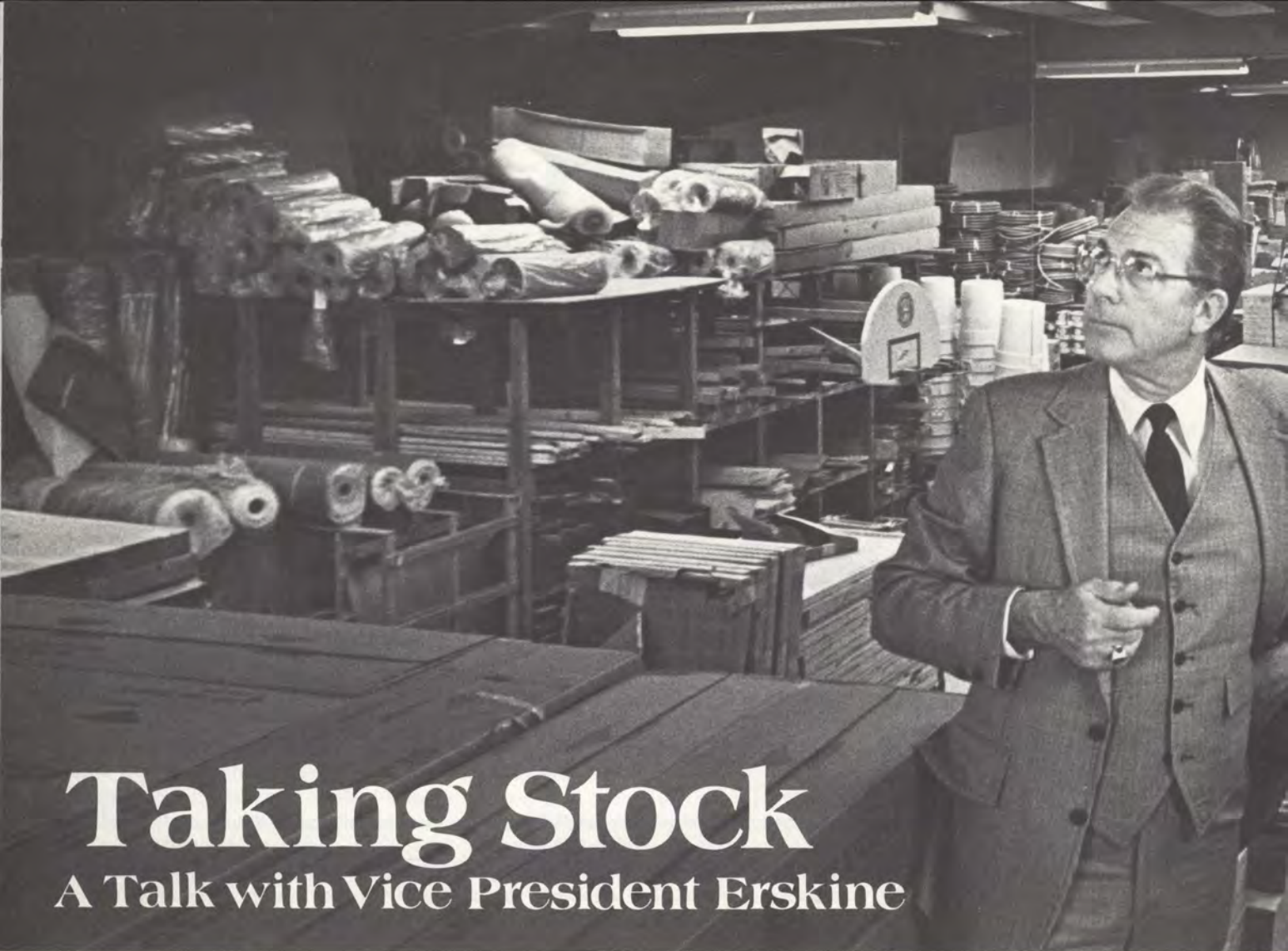
A new chapter in human power is beginning. While exciting things have happened with land vehicles and air vehicles, those on water are still being developed. Just as standard bicycle racing sets the patterns for measuring land vehicle achievements, so does boat racing for water vehicles. So far the oared eights (eight men rowing) are the fastest human-powered boats, but many IHPVA members believe a more efficient propulsion system can eclipse oars. The IHPVA will soon sanction a water event using existing rules for 2,000-meter sprint from standing start, except that there will be no restrictions on vehicle design, so long as it derives its support and propulsion from the water medium. Such a vehicle may be more maneuverable than the oared shell; it will be tested by racing around buoys.

The IHPVA is not limited to competitive events. It also sponsors presentations of technical papers on human power. Allan Abbott hosted the first such symposium last November at the Disneyland Hotel, and we expect this to become an annual event.

This most original of energy sources and the magnificent machines we have wrought have been written about in the *Encyclopaedia Britannica 1982 Yearbook of Science and the Future* and in publications such as *Bicycling Magazine* (August 1981) and *American Wheelman* (May and September 1981).

Where may the future find me? Close to human-powered vehicles of any kind, riding bicycles, promoting their development, and encouraging others toward the human-powered path. □

Peter Boor (B.S. '60) is the past-president and currently vice president and acting treasurer of the International Human-Powered Vehicle Association (IHPVA). A former aerospace scientist and engineer, he owns a retail bicycle shop in Rancho Cucamonga, California.



Taking Stock

A Talk with Vice President Erskine

Q: The University has had a lot of attention lately on its athletics budgeting. What is that situation all about?

A: The original expenditure budget for intercollegiate athletics assumed a certain level of revenue from sports events. It is now clear that that projected revenue level will not be achieved and the athletic department is now required to curtail expenditures to more closely equal the latest revenue projections. As is true in most universities, football is the sport normally expected to be the biggest revenue provider. As you know, we had a bad year at the football gate.

Q: The key to the fiscal stability of the athletic program is football?

A: Yes. Basketball, of course, at UTEP will bring pretty good revenue, but ordinarily, football is expected to earn a significant income to help support the other athletic programs, most of which earn little, if any, income.

Q: And football is the most expensive sport to maintain...

A: Yes, by far. Particularly in travel costs. We have a rather remote location

here in El Paso and increased travel cost, particularly in football, last year was one of the factors that exacerbated the budget problem for the athletic department.

Q: I guess it is obvious that we need to win in football in order for it to play its regular role of helping support the other sports?

A: That is the way it works. Unfortunately, we've not been on the football field for quite a spell and it shows in our gate receipts. We need to fill the stadium in order for our football program to do the job it is expected to do — pay its own way and help pay the way for the other athletic programs that are needed but which cannot pay their way.

Q: Would it be a safe assumption that the most persistently nagging problem in your line of work is in this area of athletics budgeting?

A: Not for business officers generally, but where there is a revenue problem, such as we have here in football, it does become a major financial concern.

Q: As it is said, it is "big business."

A: Intercollegiate Athletics at UTEP

has a budget for this fiscal year of a little over \$2,900,000.

Q: What are the principal sources for that money?

A: Almost \$900,000 of it was scheduled to come from football revenues; a little over \$700,000 from basketball; the student fee contribution, which was increased last year, was \$469,000; we budgeted the department to obtain about \$560,000 in gift money; and the balance comes from miscellaneous sources of income such as program and advertising sales, and from other sports.

Q: The overall University budget is an astronomical sum — what is that figure and where does that money come from?

A: Let's speak specifically about the 1981-82 fiscal year expenditure budget for UTEP. That total is a little over \$48 million. Of that, about \$32 million is budgeted for "Education and General" uses — the cost of funding the instructional programs of the University. The state appropriation this year amounts to about \$29,750,000 — that is tax monies appropriated for this institution for sup-



Erskine (left) with Physical Plant Director Joe Rodriguez in the campus warehouse.

port of the instructional programs and general operations. The balance of that \$32 million comes from such sources as tuition, student fees, interest from the investment of temporary cash balances, and miscellaneous sources.

Q: What is the next largest segment of the \$48 million?

A: "Auxiliary Enterprises" accounts for about \$9,777,000 in revenue and expenditures. These activities are expected to be self-sustaining enterprises and include the intercollegiate athletics program, student housing, the campus bookstore, food services, concessions, the Special Events Center and so on.

Q: Next?

A: That is the segment we call "Contracted Research and Services." The projected expenditure level in this activity for fiscal 1981-82 is about \$3.4 million. This is research that is funded from sources external to the University, to a great extent by federal agencies.

Q: Then you get into something called "Restricted Current Funds." What is that?

A: Yes, in addition to Contract

Research and Services funds, we have other restricted funds amounting to \$1,667,000 in the 1981-82 fiscal year. These are generally funds coming to the University as gifts that are restricted in their use by the donor. The two of these most commonly known are the Cotton and Fox Estate funds which have so benefited the University over the years.

Q: Then "University Service Departments..."

A: Such as the Computer Service, which is the most prominent example; also the Print Shop, Copy Service and others — departments expected only to serve the University funded by internal charges for their services. They are expected to be self-sustaining, balancing their expenditures with their charges to other areas of the University. This portion of the expenditure budget is about \$1.2 million this year. Finally, there is the area called "Designated Funds." These are generally gifts coming to the institution without external restriction, such as the Excellence Fund, but which are "designated" by the Regents or administration as to their usage. This is about

\$262,000. All this adds up to about \$48 million in projected expenditures for the 1981-82 fiscal year.

Q: UTEP, like the other universities in Texas, is subject to something called "Formula Funding." Can you explain this?

A: From an accountant's point-of-view, you might say the formula is a way of determining the resources to be provided the University, based upon an expected level of production. We are in the business of "producing," after all.

Q: What are the factors in the formula?

A: The most significant one is the number of credit hours produced — this is the principal formula factor used to set our instructional budget. But there are other factors that are used as well, such as the number of square feet of building space and of grounds, and headcount enrollment.

Q: Why have a "formula"?

A: Not all states do, of course, but I believe it is well that Texas does, with as many colleges and universities as this state has. The alternative to the formula

system — the “political process,” which is often most dependent on the persuasiveness of the institution’s leaders — is less likely to achieve an equitable allocation of resources, in my judgment.

Q: UTEP, for an example, would clearly not have much clout in contrast to, say, UT Austin or Texas A&M, in such a system?

A: I am relatively new here and am not qualified to speak with authority on Texas politics, but I think there would be some doubt about it, anyway. The formula, while certainly not perfect, enables government to reach some degree of equity between educational institutions in the allocation of tax monies for the basic budget. Requirements for new programs, changes in emphasis and the like can then be addressed in a less confusing atmosphere.

Q: You have worked under both systems — the “political” one and here, for the first time, where a “formula” is applied. Which do you think is best?

A: Well, I prefer this one, without question. I think this system lets us focus on the things that make a difference to the institution instead of wasting time on trivialities. The other side of the coin is that under the formula, the burden is on us to manage *within* that formula.

Q: What happens if we don’t?

A: Trouble. There are opportunities, even under the formula, to make a serious mistake. Suppose we were to decide, without reference to the formula, that more faculty are needed in a given area or that we need more accountants. If we increase the number of employees in total disregard of the formula, we could find that we do not have the funds to provide legislatively mandated salary increases, even though the state government publicly states it has provided the funding.

Q: There is a fairly common perception, I think that a simple drop in headcount enrollment will cause a drop in our formula funding. Is it that simple?

A: No, although headcount enrollment is generally a good predictor of funding increases or decreases. It would be theoretically possible to have a drop in enrollment and a rise in credit hour production — students taking more hours individually than usual — and that situation would not necessarily cause a drop in funding. But realistically, if there is a drop in enrollment, you can probably assume there will be a decline in credit hour production and a drop in funding for the instructional appropriation.

Q: For the next two years?

A: Yes, for the biennium, since the legislature meets every two years and we operate on a biennial budgetary system.

Q: This spring we dropped over 500 students from our enrollment this time last year. What happens if, in the “base period” for funding that is forthcoming, this summer and fall, that trend holds?

A: If there is a drop of that magnitude we will likely have a problem. It will impact on some areas of the University and not in others. But there is no question that it will cause us some headaches. We’ve got to consider too that there is a pending decrease in federal student aid programs that could very easily hit our student body hard.

Q: What can be done if it happens?

A: This kind of thing has happened before, here and in other areas of the country. Institutions like ours try to look ahead and develop contingency plans. Because of the nature of our industry, shifting emphasis and resources internally cannot be accomplished quickly — we can’t just “close down a production line.” On-going obligations to students, to the public and to our faculties, require careful phasing to effect major changes in emphasis or production.

Q: Let’s turn for a moment to another source of money. Construction on the Sun Bowl expansion, for example, brings up the matter of Permanent University Fund bond proceeds. What impact does that have on us?

A: A great impact that cannot be minimized. The funds provided us for various construction projects out of the University of Texas System’s “PUF” bond revenues permit capital improvement decisions to be removed from the political arena. The Regents administer the PUF and study these construction proposals and pass on them — with the Coordinating Board providing the state control and “overview.”

Q: What is the book value of UTEP’s land and buildings?

A: Property, buildings and furnishings have a book value of about \$91 million — that is what they cost the University. The *replacement* value, of course, would be several times that. A good portion of that came from PUF bond revenues.

Q: Physical size?

A: We have 209 acres of land on this campus and another 60 or so elsewhere, as in the Nursing College property downtown and the Charlie Davis Park land recently acquired.

Q: Drawing on your background at

Colorado and Nebraska, and elsewhere, what are UTEP’s strengths and weaknesses in the fiscal area?

A: One great strength that we’ve already mentioned is the Permanent University Fund; another, to the credit of the prior administration, was its frugality. As a result, the institution is now able to take care of many of its own problems. Another great strength is the dedication of UTEP people. Weaknesses that occur to me would include the comparatively low level of pay of some of our staff employees, and the high proportion of our students dependent on financial aid. While we do not have a great number of people on federally sponsored research money — the typical “soft money” circumstance found in universities — we do have a large number of students dependent on federal aid programs.

Q: What about community support of UTEP?

A: That is a strength, to be sure, just as is our location, the beauty of our campus, the high quality of the construction of our buildings and their maintenance, and so on. El Pasoans are interested in *their* school.

Q: Overall, what kind of financial shape are we in?

A: We’re in good shape. We’ve been able to meet some serious problems that could have festered for some time, were this not so. For example, just in the year that I’ve been here, we’ve been able to upgrade the University’s computer capability and to undertake several intermediate size building improvements that wouldn’t have been possible had the administration over the past several years been less careful.

Q: There are about 1,600 staff employees on this campus and, through their supervisors, it appears you are responsible for a good many of them...

A: It is true that the largest employer of non-teaching personnel, the Physical Plant, reports to me through Joe Rodriguez; also Personnel, Purchasing, Payroll, Accounting, the Print Shop, Post Office, Special Events Center, and several other staff offices.

Q: On a more personal plane, what brought you to UTEP?

A: Well, I reported for work at 8 o’clock Monday morning, December 1, 1980, but the process leading up to that moment goes back a way. My wife and I had visited in El Paso before and we liked it very much. After several winters in the Midwest, we decided that eventu-

(Continued on page 17)



To Roberta with love & gratitude

by
Evan
Haywood
Antone

She classifies herself a "depression baby," one who went to work at age twelve in a Hemet, California, cannery not much different from those described in John Steinbeck's *Cannery Row*. "I learned the work ethic early," Roberta Walker confesses. "All my life I have worked and studied. I guess you could call me a workaholic." Then she leans back in her desk chair, focuses her clear blue eyes on the UT El Paso campus which she views from her Worrell Hall office window, and somehow great satisfaction seems to emanate from her next assertion. "It is the students who have made it all worthwhile," she admits. "They make teaching worth the effort."

Roberta Walker retired officially in January of 1982, but she is teaching two classes this spring semester, after which she is looking forward to more leisure time to travel, to pursue her hobby of genealogy, to be with her children and grandchildren, and to enlarge her collection of tiger ceramics and paintings. Her association with UT El Paso goes back to 1947; with her departure, the University loses a 36-year veteran.

She says she is a Californian "transplanted" to Texas, for her birthplace was Berkeley, but she considers San Bernardino her home town. Some of her youth was spent in Los Angeles, where her parents struggled to survive the economic depression in various ways. "My father placed a few bets and my mother worked occasionally in movies as an extra," she remembers. She worked to put herself through San Bernardino Valley College and later UCLA, where she waited tables at dormitories. She acquired secretarial skills and worked for any realtor, advertising agency, or business that would hire her. For a short time, she was secretary to movie star Frances Langford, working in the singer's Brentwood house where she

handled correspondence and autographed pictures. Once, she remembers, "I did some ghost writing for a woman who had received a message from spirits. I am probably the only living ghost writer for a ghost!"

It was in California that Roberta met and married George F. Walker and it was also there that their son, Robert Michael, was born in 1940. World War II brought the Walkers to El Paso, where George came to supervise the building of a meat cannery being constructed in Juarez. Preferring the Southwest, the family remained here except for one short return to California in 1963.

Roberta Walker enrolled in the Texas College of Mines and Metallurgy in 1946 to complete her B.A. degree, which she

received in August of 1948. Immediately afterwards, she embarked on a Master's degree in education.

Professor Wade Hartrick mistook her one day for a new teacher. No, she informed him, she was a graduate student majoring in business subjects. Would she like to make application to teach in the Department of Business? Of course, she replied, and in 1948 she began to teach typing, shorthand, business letters and reports, an assignment which continued for ten years. In 1957, Roberta needed one additional course to complete her semester work load and the Department of English needed one additional instructor, so Professor C. L. Sonnichsen asked her to teach a section of freshman English. So impressed was he by her initial work that the next year he asked her to take two classes. Gradually she moved to half-time service in the Department of English and, by 1961, she became a full time instructor in English.

It was in 1964 under the chairmanship of Professor Joseph Leach that Roberta found a real calling in the freshman composition program at expanding Texas Western College. As the College enrollment grew, the demand increased for competent instructors in rhetoric and expository composition and Roberta Walker seemed to be especially skilled in teaching these courses.

"I enjoyed the personal contact these classes provided with the freshmen students," she recalls. "It was a time when the college had a large number of ambitious students who were eager to learn proper writing skills that would assist





their careers." She estimates that in her almost 30 years of teaching, she has instructed over 7,000 students, and she can remember hundreds of them who have achieved considerable success after completing their work at UTEP. "I lose track of some of the girls," she says, "because their names change, but I can keep up with the boys because their names continue to appear in El Paso publications." Almost half a hundred make up the following list of UT El Paso alumni, all of whom sat in classrooms to hear Roberta Walker, with her short-cut greying hair and her tailored clothes, lecture on the importance of proper diction, well structured sentence patterns, and adequately developed paragraphs.

The group includes government officials such as Paul Moreno, Steve Simmons, Jerry Woodard, Clyde Anderson, Robert Kessel, Raymond Salazar, Adrian Baca, Wanda Creamer, William Rodriguez, Louis Mier, Richard Flores, and Sam Blackham.

Also represented are over 20 business leaders including Ted Houghton and Lloyd Harris, bankers; Ronald R. Calhoun, Alan V. Rash, Herb Ehrlich, Robert T. Schwarzbach, Bernie Schwarzbach, Duane Juvrud, Gus Rallis, Steve Hernsberger, all attorneys; George Ford Davis, Gerald Georges, and Norman Pittenger, all CPAs; Guillermo Acosta, LULAC official; Robert Heasley, insurance; Freddie Strelitz, department store executive; Walter Hyatt, IBM executive; and Sam Guido, contractor.

Even sports figures such as basketball's Nate Archibald, Bobby Joe

Hill, Harry Flournoy, and Anthony Burns as well as football's Larry Durham learned to aim their sentences and paragraphs under Roberta's guidance.

If the projection of her accomplishments through her teaching is impressive, her publications reflect her areas of expertise and interest. With two other Department of English professors (Marie Waddell and Robert Esch) she published *The Art of Styling Sentences*, a widely used text which has gone through several printings. Many articles on the sentence, the paragraph, and techniques of the composition process are among her credits.

Probably her finest recognition came in 1980 when, at the commencement exercises, UT El Paso President Arleigh B. Templeton announced that she had been awarded the AMOCO Foundation Teaching Excellence Award. This prestigious award, given by the Amoco Foundation of Chicago, recognizes excellence in teachers with a \$1,000 cash

honorarium. Previously, in 1968, she had been selected as one of the outstanding faculty members at the University and presented a \$750 award for her achievements in teaching.

Of course Roberta Walker is a member of various scholarly organizations and such honor societies as Pi Lambda Theta, Kappa Delta Pi, Sigma Delta Pi, and Phi Gamma Nu, but she enjoys most her membership in the D.A.R., the Magna Charta Dames, and the Faculty Women's Club of which she was President in 1960. She plans to continue her interests in these organizations after her retirement.

"I really do not think I will retire in the strict definition of the word," she says. "I was transplanted to El Paso, so I'm simply being repotted here." She plans to continue to live at Coronado Townhouses. "I will probably even register for some classes at the University," she says. "My life has revolved around universities for so many years that I'll continue to be interested in study and learning." She will spend more time with her son, Michael Walker and her daughter-in-law, the former Dickie Tighe of El Paso, and her three grandchildren, all of whom live in Annandale, Virginia.

When asked who had been her model professor during her career at UTEP, Roberta replied, "Professor James A. Wood in the Department of Drama and Speech. I have tried to emulate the way in which he teaches his courses, for I can see the results of his effective teaching and I have tried to achieve comparable results."

Her co-workers in the Department of English as well as hundreds of former students all can testify to the fact that Roberta Walker has been successful in this attempt. □

E.H. Antone is associate professor of English at UTEP.



Roberta Walker
will be honored at a social hour
and dinner party at El Paso Country Club on April
17, 1982, at 6:30 p.m. Reservations at \$16 per person
may be made with Dr. Robert Bledsoe, Department of English,
UT El Paso, 79968.



Hector Holguin tells visitors to Holguin & Associates how computers can help in engineering and architectural planning.

In the world of computer science, acronyms add to the mystique of speed and efficiency. A new one, HOMAD, tells what a 1958 UTEP graduate is up to. It stands for: "Holguin obsoletes manual architectural drawing."

Hector Holguin, through his engineering expertise, has taken the pen from a draftsman's hand and substituted a computer terminal.

In so doing, he is an innovator in a sub-specialty of computerization known as CAD/CAM (Computer-Aided Design/Computer-Aided Manufacturing). *Time* Magazine last November described CAD/CAM as an "infant technology already firing up a billion-dollar market of its own, as well as beginning to alter the very meaning of work for blue- and white-collar employees alike."

Holguin's interest in computers began about 1960 when he entered aerospace engineering in California. "That was where I learned to use the computer as a tool," he recalls. "You had to learn it on the job; they weren't teaching that in school yet."

Upon returning to El Paso in 1966, he became part owner of Cremans, Inc., a consulting engineering firm. He formed his own company, Holguin & Associates, in 1971.

"One of my first investments was in a computer for consulting engineering," he says. "At first I couldn't afford a large computer, so I looked for other alternatives. I found a small unit manufactured by Wang Laboratories and we started developing our own programs because there were none available yet for the engineering work I had in mind."

As Holguin continued to develop software — the written instructions to the computer to perform specific functions — he decided to explore the possibility of selling it to other engineers. A pilot program was set up in Houston to test the marketing and sales potential of the product. Its success led him into full-time attention to adapting computers to engineering work.

Now he has a series of computer programs that are marketed in conjunction with the hardware of two prominent computer manufacturers — Wang and Hewlett-Packard. The programs for Wang computers involve civil engineering design and drafting, he says, while those used on Hewlett-Packard products involve architectural, mechanical and electrical engineering.

This year Hewlett-Packard is calling its sales campaign for Holguin's software HOMAD/1000. (His system is known by yet another acronym, CEADS/CADD, which stands for Civil Engineering Automated Design and Drafting System/Computer-Aided Design and Drafting.) HOMAD, of course, refers to Holguin's obsolescence factor, and the 1000 to the Hewlett-Packard numbered series of computers.

If a draftsman, for example, needs to draw up plans for a motel that will have rows of identical rooms, he can use a set of commands devised by Holguin & Associates to direct the computer to draw the basic room plan. It can be repeated as many times as needed to produce the finished drawing. When the information on the computer terminal screen looks like what the draftsman wants, he commands the computer to print the plan.

The machine that produces the drawing takes up about as much room as a rack for hanging up blueprints. Paper, in the appropriate size for an architectural drawing, is fed from the top of the machine downward. One or more pens at the top

Up From the Drawing Board:

HOMAD

by Nancy Hamilton

(there can be as many as eight in different colors) quickly draw in the details, at a 24-inch-per-second plotting speed, across the width of the paper. As the paper continues to roll, the drawing grows under the magic of technology, and the completed plan can be peeled off within a few minutes.

All the measurements are there, and the draftsman is relieved of the possibility of copying errors that can happen when he repeats the same information several times.

Does he need to draw diagrams for electrical circuitry for the building? Back to the computer. Holguin has a program for that, too. Heating and cooling systems? Plumbing? Of course.

Architectural and engineering firms, using manual methods, reportedly average from 60 to 120 hours to prepare a typical sheet of drawings. A recent national study indicates that production costs for engineering drawings run about \$75 per square foot; for architectural drawings, which are more detailed, more than \$450 per square foot. With escalating labor costs for the professionals who produce these drawings, the time factor becomes critical.

Saving time, operating at one-half to one-fifth the cost of alternate methods, has become a major selling point for Holguin's product. The cost of the CEADS/CADD materials and the Hewlett-Packard computer system ranges from about \$70,000 to \$200,000, depending on the size of the installation.

Holguin's firm has already developed computer programs that can perform contour plotting, aid in highway design, compute the volume of land fill by comparing cross sections, compute heating and cooling requirements for buildings, analyze stress on elements of structures, design steel reinforcing requirements for reinforced concrete structures, and design pipe networks for water distribution.

Dozens of other applications for engineering work are already available, and there are more to come.

Soft-spoken, ruggedly handsome Holguin has a smile as warm as the Southwestern setting of his office in west El Paso. A melodious water fountain and tiled floors are reminders of Mexico. (His parents came from Chihuahua City.) Through the use of partitions and glass, a sense of openness is given; a visitor has the feeling that a company officer would gladly drop what he's doing to help explain the CEADS/CADD system.

That is, in fact, exactly what happens at least once a week in the offices on

Cromo Drive. Purchasers of the system and members of the world-wide sales teams come in groups to see how it all works and to be taught by the company officials how to use the system.

Above the receptionist's desk is a global map with dozens of tiny lights marking cities on every continent where 800 or so Holguin systems have already been put into operation. Visitors in a single week may come from Israel, Mexico, Australia, and a dozen states.

They are greeted by Holguin himself and his staff of 60, many of whom are also alumni of UT El Paso. Among them is Danny Vickers, a 1977 UTEP graduate who was recently elevated to the new position of executive vice president.

When he has a free moment — which is rare — Holguin can be found at a computer keyboard tinkering with new ideas for programs.

Holguin has been honored by fellow El Paso professionals as Engineer of the Year. He and his wife, Rosario, who also attended UTEP, are members of the Matrix Society and he has been an officer in alumni Excellence Fund campaigns.

Last June when Ralph Chavez, a journalism graduate of UTEP, joined the Holguin organization as director of marketing, he observed that the company's publications lacked color, with mostly white covers bearing a small company logo.

"How about a little Miner orange and blue to pep this up?" he suggested, and Holguin agreed.

So now, when the CEADS/CADD system is sold in Singapore or South Africa, the people who use the training manuals have a touch of UTEP orange, white and blue on the covers — a colorful reminder that their computer system came from El Paso. □

Symbols...(from page 3)

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 9. For completion by nonprofit organizations authorized to mail at special rates. The purpose, function and nonprofit status of this organization and the exempt status for Federal Income tax purposes: have not changed during the preceding 12 months
 10. AVERAGE NO. COPIES EACH ISSUE DURING PRECEDING 12 MONTHS:
 - A. Total no. copies printed: 25,269
 - B. Paid circulation
 1. Sales through dealers and carriers, street vendors and counter sales: none
 2. Mail subscriptions: none
 - C. Total paid circulation: none
 - D. Free distribution by mail, carrier or other means, samples, complimentary, and other free copies: 25,206
 - E. Total Distribution: 25,206
 - F. Office use, leftover, unaccounted, spoiled after printing: 63
 - Returns from news agents: none
 - G. Total: 25,269
- SINGLE ISSUE PUBLISHED NEAREST TO FILING DATE:
- A. Total No. copies printed: 25,800
 - B. Paid Circulation
 1. Sales through dealers and carriers, street vendors and counter sales: none
 2. Mail subscriptions: none
 - C. Total paid circulation: none
 - D. Free distribution by mail, carrier or other means, samples, complimentary, and other free copies: 25,733
 - E. Total Distribution: 25,733
 - F. Office use, leftover, unaccounted, spoiled after printing: 67
 - Returns from news agents: none
 - G. Total: 25,800
11. I certify that the statements made above are correct and complete.
- Dale L. Walker, Editor

Alumnotes

by Sue Wimberly

The UTEP Development Office had responses to their alumni questionnaires from many of our Golden Grads, some of whom were on campus for our Homecoming 1981 celebration. Here is news of their whereabouts:

Fred W. Bailey (B.S. '20; Outstanding Ex 1960), retired general manager of the Fresnillo Mining Company, and his wife, **Josephine March Bailey** (1917 etc.), make their home in El Paso. **John J. O'Keeffe** (B.S. '21), a retired petroleum engineer, and his wife, Mildred, live in San Diego, California. **Ewald Kipp** (B.S. '22) is in Salt Lake City, and **Paul Hale** (B.S. '24), retired metallurgical engineer, lives in El Paso. **Berte R. Haigh** (B.S. '25; Outstanding Ex 1955) and his wife, Caroline, are living in Midland where he is a consultant with the University of Texas System Lands Office. **Lee C. Smith** (B.S. '29), retired explorations manager of Sun Oil Company, makes his home in Dallas. **Edwin B. Douglas** (B.S. '30), retired from mining, lives in Oceanside, California. **Gideon Fischer** (B.S. '30), retired from mining engineering, is in Austin. Also retired from mining engineering is **John Payne Jr.** (B.S. '31; Outstanding Ex 1951) of New York City, who attended Homecoming.

1920-1949

Joseph F. Freidkin (B.S. '32; Outstanding Ex 1962) has been awarded the Royce J. Tipton Award by the American Society of Civil Engineers.

Richard H. Sneed (B.S. '33) lives in Coeur D'Alene, Idaho.

John T. Eady (B.A. '34) is in the insurance business in Corsicana.

William J. "Jack" Jones (B.S. '35), retired chief engineer for the Southern Pacific Railroad, resides in San Francisco.

Leonard H. Chant (B.B.A. '37), of Quartz Hill, California, has retired from his business as a certified public accountant to spend time traveling.

Hardie B. Elliott, M.D., (B.A. '37) is a retired physician in Pinehurst, North Carolina.

Morris H. Raney (B.A. '40) is a retired attorney in El Paso.

Eugene P. Rister (B.A. '40) is an El Paso certified public accountant.

Thelma Hobbs (B.B.A. '40) has started a new business, The Quilting Corner, in Austin.

John E. Krebs (B.A. '40) raises registered Herefords in Weatherford, Texas. He is author of *To Rome and Beyond*, his memoirs of World War II.

Ada McDonnell Long (B.A. '42) teaches kindergarten at Crockett School in El Paso.

Cecil A. Thomas (B.B.A. '40) is retired and living in Granbury, Texas.

Albert DeWitt (B.A. '41) is vice president of property management with DeWitt & Rearick in El Paso. He is married to the former Billie Louise Nance.

James M. Maurice (B.S. '41), retired mining engineer, lives in Phoenix.

J. Tod Meserow, Col./USAF, ret., (B.S. '51) and his wife, **Phyllis Meserow** (B.A. '42), live in Prairie DuLac, Wisconsin, where he operates a small farm. He is a consultant with Human Resources Development and has published a book on time management.

Vernie A. Stenbridge, M.D., (B.S. '43; Outstanding Ex 1978) is the 1981 recipient of the Ward Burdick Award presented by the American Society of Clinical Pathologists. The award is made to the Fellow of the Society who has made the most meritorious contributions to the service of clinical pathology. Dr. Stenbridge is professor of pathology and chairman of the Department of Pathology at UT Southwestern Medical School in Dallas, and director of pathology laboratories at Parkland Memorial Hospital.

Jean H. Miculka (B.A. '44) is an associate professor of drama and speech at UTEP: she is the author of three books.

Mary Newell Tippin (B.B.A. '45) has many activities, among them service on the board of the El Paso Independent School District and as second vice president of the Texas Congress of Parents and Teachers.

Jesse Gavaldon, ScD., Col/USA, ret., (B.A. '47) a retired metallurgist, has been named to *Who's Who in California 1981-82* "in recognition of exceptional achievement, leadership and service." He was associated with the McClellan Air Force Base where he established the metallurgy laboratory.

James M. Scott (B.S. '49) is district manager for Bell System Communications in Las Cruces. His wife, **Marta H. Scott** (B.A. '50), who received her M.A. from New Mexico University, is a junior high school teacher in special education in Las Cruces.

Neill Longley, M.D. (1949 etc.), whose boyhood memories of his father's barber shop in Andrews, Texas, are delightful reading in the December 1982 *Texas Monthly* article "Texas, 1945 or The Sad Cowboy" by Nicholas Lemann, is chief of radiology at St. Elizabeth's Hospital in Houston.

Guillermo Tovar (B.S. '49) of La Mirada, California, is employed by Bechtel Power Corporation designing nuclear power plants.

1950-1959

Joseph F. Alderete, M.D., (B.S. '50), FAA flight surgeon, is currently assistant regional flight surgeon for the southern district of the United

States. His home is in Tucker, Georgia.

Margaret Hamilton Dickson (M.A. '50), former consultant in foreign languages with the El Paso Public Schools, is retired.

Mary Ethel Hicks Thayer (B.A. '51; M.Ed. '69) is an artist and housewife in El Paso.

Estela Portillo Trambley (B.A. '50; M.A. '77) was one of ten winners in the recent Texas Writer recognition contest. The \$2,000 award was for the selection of a chapter from her book *Women of the Earth*. She expects to publish four plays with Eastern Michigan University Press.

Tom D. Porter (B.B.A. '51) and his wife, **Gerry Porter** (B.B.A. '51), have recently moved to Miami, Florida, where he is president of Tropigas International Corporation. Tom was formerly president of the Western Liquid Gas Association in Sacramento.

Sam Kobren (B.B.A. '51) is station manager for KDBC-TV in El Paso.

Zena Oliver Knight (B.S. '51) has retired in Midland after serving as a school principal in El Paso.

William F. Glass (B.A. '51) is president of a contracting firm in Corpus Christi.

Marilyn O'Sullivan Davenport (B.A. '52), director of elementary instruction for the Albuquerque Public Schools, has been named Administrator of the Year. She also serves as president of the Albuquerque Principals' Association.

Ronald W. Schaefer (B.S. '52) has been elected a second vice president in the special industries services department, Continental Bank of Chicago.

Howard Dorgan (B.A. '53), professor of communication arts at Appalachian State University, is co-editor of *The Oratory of Southern Demagogues*, published by Louisiana State University Press.

Jimmy Angelos (B.A. '53) is an accountant and administrator with El Paso Natural Gas Company in El Paso.

Ralph Barnett (B.S. '53) of Golden, Colorado, is vice president and general manager of the American Institute of Mining Engineers.

Marion E. Spitzer (B.S. '53) is vice president, Western Region, of the Stone Oil Corporation, Oklahoma City. His wife is the former **Mary Lou Neely** (B.A. '51).

New Address?

New Address

Old Address

Name _____

Number & Street _____ Apt. Number _____

City _____ State _____ Zip _____

Year Graduated, attended _____

Mail to: Development Office, UT El Paso, El Paso, Texas 79968

Travis H. Bennett (B.A. '53) is a research microbiologist with Eli Lilly and Company in Indianapolis.

Gloria Estrada McCrary (B.S. '56) is a chemist at the Physical Science Laboratory, New Mexico State University.

Robert Laya, LTC/USA, ret., (B.A. '55) is an agent with a financial programming company in Kingsville, Texas. His wife is the former Sally Fjerstad (B.A. '56).

Betty Smith Mischen (B.A. '56; M.A. '62) is an English consultant with the Plano Public Schools, and serves as president of the Association for Texas Language Arts.

Charles A. Casey (B.A. '56) and **Jeannette Wise Casey** (B.A. '55) are living in Lutherville, Maryland, where he is pastor of the Valley Baptist Church.

Juan Alva, M.D., (B.A. '56) of Chapel Hill, North Carolina, is director, Medical Unit, John Umstead Hospital.

Daniel M. Sepulveda, M.D., (B.A. '56) practices medicine in El Paso.

Arturo R. Aguirre, Col./USA, ret., (B.A. '59) is a member of the Board of Trustees, El Paso Independent School District.

1960-1965

Raymond L. Lowrie (B.S. '60), who received his M.S. degree from Colorado School of Mines in 1971, has been appointed director, Eastern Technical Center, Office of Surface Mining, United States Department of the Interior, headquartered

in Kansas City, Missouri. The center provides technical support to coal mining states east of the Mississippi River.

Moselle Alden Ford (B.A. '61; M.Ed. '66), after working part-time for the past 14 years, is now a full-time instructor at Amarillo College teaching English as a second language.

Thomas Hancock (B.S. '61) is an exploration manager in geology; he and his wife, Gigi Hancock, make their home in New Orleans.

Louis Moreno (B.B.A. '61), owner of a real estate investment firm in Long Beach, California, teaches real estate courses at Cypress College.

James B. Emery (B.B.A. '61), who lives in San Angelo, is vice president of marketing for General Telephone Electronics of the Southwest.

Glenda Eldredge Watson (B.S. '61), who completed her M.A. at Pepperdine University, is school improvement coordinator for the Huntington Beach High School District, California.

Brenda Bannister Sande (B.A. '61) is an elementary physical education specialist in Spokane, Washington.

Renda Jean Sharp Reaves (B.S. '62) and her husband, Cletis B. Reaves, are retired and building a home in Bulverde, a suburb of San Antonio. She taught in the El Paso public schools for 12 years; he recently retired from the El Paso Company.

Henry G. Rettig (B.A. '62) of DeBruyn-Rettig Advertising Inc. has been named president of the board of directors of the Better Business Bureau in El Paso.

George Butterworth (B.B.A. '63) is an attorney in El Paso.

Shirley Clement (B.A. '63) won the \$100 Panhandle Pen Women's Award at the Poetry Society of Texas annual awards presentation held November 7 in Dallas. She also placed in nine other categories of competition.

Paul Zeek (B.A. '63), head athletic trainer at Lamar University, has been named trainer of the year by the National Collegiate Athletic Trainers Association.

John Navarrete Jr., D.D.S., (B.A. '64), who practices dentistry in El Paso, coaches youth football for the Country Club Optimist Club.

Oton Enrique Montoya (B.B.A. '65) is the owner of an accounting practice in El Paso.

John S. Ylisen, LTC/USA, ret., (B.B.A. '65) is an auditor in El Paso.

Nelva Joy Stockman Bixler (B.B.A. '65) is a secretary-accountant in El Paso.

Welborn Williams Jr., LTC/USA, (B.A. '65), who was named outstanding ex-student for 1981 at Bel Air High School, is assigned to the Office of Deputy Chief of Staff for Operations and Plans Washington, D.C.

1966-1969

John Clark Myers (M.Ed. '66) is retired and living in Bracketville, Texas.

Raymond O. Mergenthal, Maj./USA, ret., (B.A. '67; M.Ed. '71) is employed as an education specialist with the instructional program development department, Naval Education and Training Support Center (Pacific), in San Diego.

Douglas B. Manigold (B.S. '67) is employed by the U.S. Geological Survey in Denver, involved with the water resources of the northeast quadrant of Colorado.

Bobbie L. Riley (B.A. '67) has received her Master's in education from the University of Southern California while working for the Department of Defense in Seoul, Korea.

Art Tait (B.A. '68), who retired from the U.S. Army in 1970 and taught math in the public and private schools in El Paso for 13 years, is keeping busy driving a school bus and building model railroads.

A.E. "Sam" Lidard (B.S. '69; M.Ed. '70) is an educator, poet, author and curriculum designer in Salinas, California. He is the editor of Headboard Press and author of several poetry chapbooks.

John Nance (B.A. '69) is a lawyer in El Paso.

Pat Ellis Taylor (B.A. '69; M.A. '76), winner of the Southwest Book Award presented by the Border Regional Library Association for her book, *Border Healing Woman*, the story of folk-healer Jewel Babb, is co-owner of Paperbacks Plus, in Austin.

1970-1975

Ignacio Urrabazo Jr. (B.B.A. '70) is vice president of the National Bank of Commerce of San Antonio.

Kathleen Love Bell (B.S. '71) is completing her Master's in education at Georgia State University. Her husband, Dr. Frank Bell, is a surgeon at St. Joseph's Hospital in Atlanta.

Carlos Gutierrez, M.D., (B.S. '71) is a pediatrician in El Paso.

David Jones (B.B.A. '71), of El Paso, is president of Estate Funding Specialist, Inc., a company which designs pension plans.

Laura Geiser (B.B.A. '71) is commercial property manager for St. Paul Insurance Companies, Portland, Oregon. Her husband, **Thomas Geiser** (1967 etc.) is employed by Zimmer Gunsul Frasca,

Deaths

In the June 1981 NOVA listed, under "Deaths," an erroneous notice on Antonio C. Aguilar (B.A. 1965). Although a person by that precise name was listed in the obituaries of the local newspapers, the Antonio C. Aguilar who is an alumnus of UTEP is alive and well. We regret the error and any embarrassment or inconvenience it may have caused Mr. Aguilar.

—Editor

Jennie Myrtle Osborne Whitney (M.Ed. 1946), a retired Burges High School counselor, October 16, 1981. She is survived by five sisters and four brothers.

James A. Greene, MSGT/USAF, ret., (B.S. 1979), October 19, 1981. Survivors include his wife, Ida M. Greene, and three daughters.

August L. Aimone, Maj./USA, ret., (B.S. 1956), a resident of El Paso for 35 years, October 30, 1981. A life member of the Retired Officers Association, El Paso Historical Society and the El Paso Cancer Treatment Center, he was also a fellow of the Royal Philatelic Society of London and an avid book collector. He was a teacher at Bowie High School for 17 years. Survivors are his wife, Virginia Meyer Aimone, a son, August L. Aimone, Jr., and a daughter, Virginia A. Martin.

Helene H. Johnson (B.A. 1937), an El Paso resident for 50 years and a retired teacher, November 2, 1981. She is survived by two daughters and one son.

Ruth C. Mitchell (M.Ed. 1954), November 5, 1981. She was retired from the El Paso Public Schools.

Noel Aceves, Jr., (B.S. 1974), a medical technologist with William Beaumont Army Medical Center, November 22, 1981. Survivors in-

clude his son, Daniel, his mother and several brothers and sisters.

Hibbard G. Polk (M.Ed. 1951), who retired on June 30 as deputy superintendent of the El Paso Independent School District, November 24, 1981. He began his teaching career 41 years ago at Bowie High School, and served in the district as principal, personnel director, assistant and associate superintendent of secondary education. Survivors are his wife, Sue Jackson Polk, and two sons. His brother, Baxter Polk, retired as librarian at UT El Paso in 1971.

Daniel Byron McKinney, Jr., (B.B.A. 1953), acting president of Kinrage Investment Company, in El Paso, December 12, 1981. He was a charter member of the Matrix Society. Survivors are his wife, Rita McKinney, two daughters and two sons.

Virginia Beal (1929 etc.), January 3. She is survived by two sisters.

Robert M. Lait (B.S. 1951), lifelong El Paso resident and retired vice president and general manager of El Paso Pipe and Supply, January 23. He is survived by his wife, Miriam Lait, three daughters and a son.

Robert L. Boling (B.A. '40), El Paso home builder, January 26. He was president of Tri-State Homes and was a partner in Apollo Development Company. Survivors are his wife, Mary Nell Boling, and five children.

Patricia Stemsley (M.Ed. 1979), a teacher at Edgemere Elementary School in El Paso, January 30. Survivors include her husband, Maj./USA, ret., Sylvester Stemsley, a son and three daughters.

Partnership, Portland, and is presently on assignment in Khartoum, Sudan.

Lynn Kuberski Bishop (B.S. '71), who lives in Walla Walla, teaches third grade; her husband Stan Bishop, is an energy consultant for Pacific Power and Light.

Adam Nieto (B.A. '71) is a farmer and cattle raiser in Vega, Texas.

Nancy Bynquist Johnson (B.A. '71) and her husband, Stan Johnson, are parents of two children; they make their home in Garland, Texas.

Becky Ross Petty (B.S. '71) and her husband, Jim Petty Jr., are owners of a music store in Arlington, Texas.

Samuel Glynn McLellan (B.A. '71) is a lecturer in the English department at the University of Texas, Austin. He received his Master's from Exeter University, England, and his Ph.D. from UT Austin.

John Gilbert Gonzalez (B.A. '71), of Garland, Texas, is a manpower specialist with the U.S. Department of Labor.

Joseph P. Riedle (B.A. '71) is a restaurant owner in Palos Hills, Illinois.

George DeLeon (B.A. '71) is a biology teacher and coach at Burbank High School, San Antonio.

Julie White (B.S. '71) is director of the Institute of Management, Old Dominion University, Norfolk, Virginia.

Charles C. Brady (B.S. '71) who was recently promoted from sergeant to first lieutenant in the Air Force ROTC program, is assigned to New Mexico State University as assistant professor of aerospace studies, and has been awarded his second Air Force Commendation medal. He received his Master's in education in 1975 from Texas Christian University.

Kathleen Paxson (B.S. '71), executive director of the El Paso Diabetes Association, has been elected the first woman president of the Board of Trustees, Ysleta Independent School District. Her husband, **Sam Paxson** (B.A. '55) has served as district judge in the 210th District Court since 1974.

W. Gregg Tyler (B.A. '71) is a television engineer for KOMC-TV in Oberlin, Kansas.

Arthur Ward (B.B.A. '72), formerly with the insurance division of Ford Motor Company, is selling real estate with Priority One, Future, in El Paso.

John F. Haynes Jr., M.D., (1972 etc.), who was graduated from the University of Texas Medical School, San Antonio, in May, 1980, is serving a residency in emergency medicine at Los Angeles County Hospital.

Robert H. Woolley Jr. (B.B.A. '72) is a certified public accountant in El Paso.

Juergen Knoop (B.B.A. '72) is a subcontract evaluator in Hurst, Texas.

Alethea Ann Haynes Sutherland (B.A. '72) and her husband, **Thomas W. Sutherland** (B.B.A. '72), reside in Bastrop, Texas, where she is an agent with the Internal Revenue Service; he is employed by Trojan Drilling Company.

Ken England (B.B.A. '72), president of the El Paso Chapter of Certified Public Accountants, is a tax counselor with the El Paso Natural Gas Company.

William Correa (B.S. '73) and **Linda Ellis Correa** (1966 etc.), reside in Richardson, Texas. Bill is a consulting engineer with Black & Veatch, Dallas; Linda, a CPA, has recently opened her practice in Richardson.

Miriam S. Glover (B.S. '73), who has taught math at Hillcrest Junior High, El Paso, since her graduation, will be moving to Artesia, New Mexico, and employment with the Yates Petroleum Company.

Sharon Marshall (M.Ed. '73) has been named executive director of Women's Haven of Tarrant County, Texas.

Samuel J. Calvillo (B.S. '73) has been named vice president and a member of the board of directors of McDaniel Engineers, Houston.

David P. Leibson (B.S. '74; M.A. '78) has returned to El Paso after an interesting sojourn. In 1978-79, he served as a TOEFL (Teacher of English as a Foreign Language) instructor in North Yemen, then as counselor in the London Central High School, England. After a brief return home, he went to San Jose, Costa Rica, teaching English at the Instituto Audio-Visual de Ingles, a private school. He is presently an English instructor at El Paso Community College.

Eduardo S. Rodela Jr. (B.S. '71) is working toward a doctorate in psychology at the University of Michigan, where he received his Master's in social work in 1972. He is married to the former **Carlota Arriola** (B.S. '75).

Diana Chaparro Malouly (B.B.A. '75) is a CPA with the El Paso Company.

Burdette "Bud" Wilcox Jr. (B.S. '75; M.S. '78) is a design engineer with the El Paso Natural Gas Company.

Raul L. Hernandez (B.S. '75) is a teacher with the Ysleta Independent School District.

Cynthia Neu (B.A. '75), El Paso television news anchorman, **Peter F. "Pete" Heinlein** (1964 etc.), former Sun Towers Hospital public affairs director, and **Sarah Pacheco** of Channel 4, El Paso, have started a television news service, **Capital Ideas**. It will air from Washington, D.C., localizing national news for broadcast in the Southwest.

Russell Autry (B.A. '75) has been named editor of *El Paso Today*, magazine published by the El Paso Chamber of Commerce.

1976-1981

Cynthia Alvarez (B.A. '76), a U.S. Navy seaman recruit, has completed training at the Naval Training Center, Orlando, Florida.

Robert Spear (B.B.A. '76) is assistant vice president and manager of employee relations with State National Bank, El Paso.

Jack D. Redman (B.S. '77) is a doctoral candidate at New Mexico State University.

Rachael Rivas (B.N. '77) is employed in nursing in El Paso.

Dennis Lawrence Ortiz (B.S. '77) is attending the Texas College of Osteopathic Medicine in Fort Worth. He is married to the former **Donna Gale Kaufmann** (B.A. '81).

Michael A. Ludeman (B.B.A. '78) is employed by Mountain Bell as a communication consultant to the apparel industry.

Ricardo Aduato III (B.S. '78) has joined the staff of the Legislative Budget Office in Austin.

Marilyn Stoler (B.B.A. '79) is a buyer with Petro Peru Oil Company in Houston.

Ricardo Gonzalez (B.A. '79) is an assistant U.S. attorney in El Paso.

Gary J. Pero, Ens. USN, (B.B.A. '79) has completed surface warfare officers' basic course in San Diego.

Gregory Justice (B.A. '79) has enrolled in the Master of Arts in Biblical Studies program at Multnomah School of the Bible in Portland, Oregon.

Bernardino Olivas Jr. (B.S. '79) has been appointed sales representative for Wyeth Laboratories. He will be headquartered in El Paso.

Winston E. Watkins (B.S. '80) is a sophomore

medical student at U.T. Medical Branch, Galveston.

Leticia Saldana (B.S. '81) is employed in the Engineering Design Division of Nuclear Power Plants, Tennessee Valley Authority in Knoxville.

Laura Fuentes (B.S. '81) is a computer programmer/analyst in Juarez.

Paul J. Summers (B.F.A. '81) is a ceramics teacher at El Paso Community College and the El Paso Museum of Art.

Barbara Anne Holdampf (M.S. '81), of Big Spring, has been named the director of the associate degree of nursing program at Howard College. She was previously assistant to the administrator of the Multiple Disability Unit, Big Spring State Hospital.

Cheryl Chavez (B.S. '81), an elementary school librarian, is currently working on her Master's at the University of Houston, Clear Lake.

Gina Gaston (B.A. '81) is a sales promotion specialist for the Western Company of North America, Dallas.

Patrick B. Tracy (B.A. '81) is a project engineer with Exxon in Midland.

Charles P. Warner (B.S. '81) is a research engineer at Southwest Research Institute, San Antonio.

Charlotte M. Wiedel (M.A. '80) and **Michael J. Wiedel** (M.B.A. '81) live in El Paso; she is a teacher at Bel Air Junior High School.

Erschine...(from page 10)

ally we would like to settle permanently in the Southwest if the opportunity presented itself. Eventually, I was nominated for this position at UTEP. When I was invited down here for an interview and met Dr. Monroe, I felt that the two of us could work together very easily. I think he felt the same way. I was very grateful when I was selected for the job.

Q: After a year, how have you and Mrs. Erschine taken to El Paso?

A: We love it. Even our dog Nikki loves it. We didn't have too many visitors when we were in Nebraska but we seem to be having more house guests than ever before. My son and his wife, who live in Omaha, love to come down to visit, as does my daughter, who lives in Denver.

Q: How is it that a person from Ketchikan, Alaska, can adapt to El Paso so easily?

A: When we were first married, I took my wife up to Ketchikan — which is on an island. I drove her out to the end of the road one way, then drove her out to the end of the road the other way. It started to rain and it rained every day of the two weeks we were there. The rain in Ketchikan comes down horizontally. She told me, "If you ever think I am going to live here with you, you are mistaken." Now, that took Ketchikan out of the picture. I think we've really been trying to get down here all our married life and we are very happy that we've made it. □



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