

BINGHAM CANYON DOCTOR

The Life and Legacy of Paul S. Richards

...

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I LITTLE THOUGHT
WHEN THEY LEFT
HOME
THAT THEY WOULD
NE'ER RETURN
THAT THEY IN DEATH
SO SOON WOULD SLEEP
AND LEAVE ME ALL
ALONE

Inscription on a gravestone in the Castle Gate cemetery for Basil and Brindley A. Gittins, father and son who died in Utah's second worst industrial accident, the Castle Gate Mine explosion, on March 8, 1924. All 171 miners in the mine at that time died, as did one rescuer who perished from carbon monoxide poisoning

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ABOUT THE COVER ART

TITLE: Bingham Canyon Doctor

ARTIST: Kelly Pugh

The bustling, healthy communities that make up the southwest part of the Salt Lake valley today are a far cry from the mining and farming communities that populated the area in the early 1900s. But, while farms have been replaced by new housing developments, and miners replaced by high-tech workers, both generations have one thing in common, their optimism for the future.

This mural includes images from both eras and seeks to highlight the differences, and similarities, in both the geography and health care of the 1900s, and today. Images in the mural include:

Dr. Paul S. Richards. Widely known as the father of occupational health in Utah, Dr. Richards served 26 years as the medical director of the Bingham Canyon Hospital. He is remembered for this tireless work to reduce injuries and fatalities among miners and other workers, and his compassion and vision for creating a healthy community in the Bingham Canyon area.

The Galena Days Parade. During Galena Days – a sometimes unruly tradition celebrating mining at Bingham Canyon – Dr. Richards drew attention to occupational safety in creative ways, such as the parade float. The “injured patient” is Rolland “Red” Mayne, father of the late Utah State Senator Eddie P. Mayne, former AFL-CIO president, and a founding father of the University of Utah’s Rocky Mountain Center for Occupational and Environmental Health. Positioned to the right of Dr. Richards is the Bingham Canyon undertaker.

TRAX. While trains were not an uncommon sight in the early 1900s, those early residents would be amazed at the high-speed TRAX trains that now connect the southwest corner of the valley with downtown Salt Lake City and the University of Utah.

SODA Row. The heart of the Daybreak community, the fountains at SODA Row provide families a place to cool off and have fun in the hot summer months. Daybreak is known for its commitment to fostering a healthy lifestyle by creating a walkable community where families can enjoy the outdoors together.

Medical Imaging. While x-rays were available in the early 1900s, Dr. Richards would be envious of the advanced medical imaging doctors have access to today. At University of Utah Health Care doctors can now use real-time three-dimensional imaging during heart and brain surgery to ensure they provide the safest and most effective care to patients.

The Wasatch Mountains. One thing that hasn't changed in the last 100 years is the spectacular view from the West side of the Salt Lake valley. The majestic peaks of the Wasatch Mountains still reflect the beauty of the valley and its growing national reputation as a great place to work and raise a family.

Modern Health Care. The South Jordan Health Center offers a full range of medical services for patients including primary care, specialty care, and out-patient surgery. The legacy of Dr. Richards and the compassionate care he provided in his era is carried forward by the dedicated physicians and caregivers from the University of Utah.

The mural, Bingham Canyon Doctor, featured on the cover is displayed at the University of Utah South Jordan Medical Clinic.

About the Artist

Kelly Pugh has always loved to draw and paint the world around him. A graduate of Southern Utah University, Kelly lives with his wife Sheri and five children in Blanding, Utah. He is a part owner of Ridgeway Art Gallery and a full-time artist.



Dr. Paul S. Richards

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Dr. Paul S. Richards Family

Foreword

Paul Snelgrove Richards, MD – or “Dr. Paul,” as just about everyone knew him – was a pioneer in occupational safety and health. His legacy is one of progress, medical insight, and constant concern for the American worker. His story is well worth telling.

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From reducing injuries and falls in mine shafts to instituting the use of respirators by miners; from improving surgical outcomes to implementing childhood immunization programs; from legislative efforts to define compensable occupational diseases to forming a foundation for the betterment of humanity, Dr. Paul led a multitude of diverse efforts on behalf of workers, beginning at the world’s most valuable mine and ending in a clinic. His enthralling story inspires physicians, human resource professionals, safety consultants, OSH students, and many others involved in the modern workplace. Students of history will appreciate not only the advancements that Dr. Richards devised and oversaw, but also the fact that they all came before the advent of OSHA, raising probative questions about the assumed necessity of government regulation to improve industrial safety.

The field of occupational safety and health continues to feel the impact of Dr. Paul's efforts. This book describes many programs and policies that he developed and that demonstrate his unwavering commitment to injury prevention and scientific progress. While more than half a century has passed since Dr. Paul's death, his influence is still clearly evident in modern workplaces.

Of course, Dr. Paul was not infallible. The text describes how, at times, his dedication to his work exacted a toll on his family and friends. He was not immune to the difficulty of balancing professional drive and personal life. But he worked hard to achieve this balance and ultimately left not only an enviable professional legacy, but a laudable personal example as well.

16 Dr. Paul's legacy continues today. His influence reaches into industries well beyond the world's greatest mine, where he implemented and updated so many effective programs. Having established a medical foundation for occupational safety and health, the Richards Foundation has now combined efforts with the Workers Compensation Fund to endow the Dr. Paul S. Richards Chair in Occupational Safety and Health. The chair is bestowed to the Rocky Mountain Center for Occupational and Environmental Health at the University of Utah, which leads efforts to train the next generation of leaders in the field.

Dr. Paul S. Richards was a pioneer in occupational safety and health. While specific challenges facing workplaces have changed and will continue to change, the principles and values he applied are timeless. Understanding his story will help us to ensure continued progress in the field he loved. Our society depends on the health of our workforce and this is the story of a man who dedicated his life to improving exactly that.

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Introduction

Dr. Paul S. Richards was one of the heroes of worker safety and occupational medicine in Utah. In 1922, as a young doctor, just short of thirty years old, with a medical degree from Harvard, Dr. Paul took over the hospital at Bingham Canyon. For twenty-six years he served the people of that mining town. He grew the hospital from five employees and a single doctor to sixty-seven employees and five doctors. An energetic man who rose early and worked long days, Dr. Paul also tried to improve community health by organizing immunization drives and mass tonsillectomies for poor children and by offering sex education classes in the local high schools.

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Miners suffering from chronic health problems and mining injuries drew his attention to the problem of occupational medicine, which was called industrial medicine at the time. He realized that many of the health problems could be solved with preventive measures and he encouraged the local mining companies to hire an industrial hygiene expert. Dr. Paul helped promote a Safety First program both locally and nationally, leading to improved sanitation, lighting, and ventilation for miners, as well as helmets and safety goggles. He

contributed toward the design of the goggles by making plaster faces, exposing them to dynamite blasts, and analyzing the patterns formed by the embedded particles. A powerful personality, Dr. Paul was particularly effective in convincing mining officials of the advantages of safety programs.

As part of these efforts, from 1938 to 1940, Dr. Paul served on the Utah Medical, Labor, and Industrial Council and served on a committee that drafted the first occupational disease law for Utah in 1941. The chairman of the Industrial Commission declared in 1958 that "the remarkable accomplishments of the Industrial Commission of Utah in the field of Industrial Medicine since 1941 must be credited almost entirely to Dr. Paul." Dr. Paul also became known for his skill in repairing ruptured tendons in shoulders and rehabilitative surgery for spinal injuries.

20 Dr. Paul left Bingham in 1948 because over-exposure to radium and x-rays had damaged his hands and he had finally developed skin cancer on his hands. Surgeons in New York City stripped the skin from his fingers and parts of his hands. Further operations followed and he spent the rest of his life in pain. He returned to practice, opening the Memorial Medical Center in Salt Lake City, naming it in honor of his grandfather, Willard Richards, and three of his father's brothers, all of whom were physicians. He worked with his daughter, Lenore, also a physician, in one of the most innovative medical practices in Utah.

As he declined with terminal prostate cancer, Dr. Paul made sure that his wife was provided for and devoted much of his personal property to creating the Richards Memorial Medical Foundation in 1958. It was not named after himself, but after numerous medical doctors among his ancestors and relatives. The foundation made annual donations to fund medical research and medical education in Utah. The Rocky Mountain Center for Occupational and Environmental Health at the University of Utah, founded in 1977, became an intellectual heir

of Dr. Paul's concern for safety and occupational medicine. This center provided graduate training for physicians, industrial hygienists, and safety professionals, as well as outreach training and continuing education for tens of thousands of people in Utah. The center also pursued research and sponsored medical conferences.

Motivated by a desire to help provide financial stability for the Rocky Mountain Center and to further promote the causes of worker safety and occupational health in Utah, the Richards Foundation and the Workers Compensation Fund (WCF) combined in 2008 to create the Dr. Paul S. Richards Endowed Chair in Occupational and Environmental Health and Safety. The Rocky Mountain Center and WCF also funded a historical research project to collect pictures, interviews, and archival information on Dr. Paul and the history of worker safety and occupational medicine in Utah. The results of the project were deposited in Special Collections at the University of Utah. This book is adapted from the report written for that research project and from Dr. Paul's own memoirs. The words of the report and Dr. Paul's own words, as transcribed by his sister, Ann R.

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Barton, are mixed together with no attempt to retain the origin of the original words. *To find citations and a more academic format, please look to the report.* It is important to remember that Dr. Paul tape-recorded the "Memoirs" and that he never saw a written transcript of them and thus was never able to make any corrections.

Because of the number of people in this book with the last name of Richards, I have elected to use first names for Paul and his family, rather than follow the convention of using last names.

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Chapter I

PAUL S. RICHARDS AS A YOUNG MAN

The Richards Legacy

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Paul S. Richards had deep roots in Utah history. His grandfather was a member of the first group of Latter-day Saint pioneers in 1847 that brought Anglo-American settlers to a high mountain desert that they hoped to turn into a new Israel. Willard Richards was also a medical doctor, so the story of Paul properly begins with his grandfather.

Willard Richards was born in 1804 in Massachusetts, the last of eleven children. As a young child of four, he fell from the scaffold of a barn, suffering a head injury that plagued him for the rest of his life with partial paralysis and tremors. Unable to work on the family farm, he turned to the life of the mind. A good education led to him obtaining a teaching certificate at the age of sixteen. He taught in various schools in the New England area and the state of New York, while constantly improving himself through self-education. In 1827, at the age of twenty-two, he also turned to giving public lectures on science, such as the marvel of electricity. At that time, electricity was only a scientific curiosity that intrigued people, not the foundation of civilization. These lectures

led to lectures on medicine. Motivated by the death of his sister, Willard turned to a more serious study of medicine, moving to Boston to learn at the Thomsonian Infirmary under the direction of Samuel Thomson.

Thomsonian Medicine, a form of alternative medicine, relied on herbology and was often actively hostile to traditional (orthodox) medicine. Thomsonians were only one of many alternative forms of medical care popular with Americans during the nineteenth century. Distrust of traditional medicine was not unjustified. In the days before the germ theory of disease transformed the understanding of disease, and before the development of anesthetics transformed the practice of surgery, going to a traditional doctor was often more hazardous to a patient's health than staying away. Alternative medicine continued to be popular in the United States, but by the twentieth century traditional doctors had effectively asserted dominance through a combination of developments that made their orthodox techniques much more effective and by control of state licensing bodies.

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Willard practiced medicine for two years before his life was changed by a new book. His cousins, Brigham Young and Joseph Young, had found The Book of Mormon and become Latter-day Saints (LDS), also called Mormons, members of the Church of Jesus Christ of Latter-day Saints. Willard also found the new book spiritually moving. While trying to choose between continuing his career in medicine and pursuing Mormonism, Willard suffered a stroke that partially paralyzed the left side of his body. Over a year passed before he was healthy enough to travel. A visit from his cousin Brigham convinced Willard to travel to Kirtland, Ohio, to meet Joseph Smith, the founder and prophet of the new church. His older brother, Levi, also a physician, accompanied him in order to care for him. Willard converted to the new faith and Brigham Young baptized him on the last day of 1836 in Kirtland. Other members of his family also converted.

After a blessing of healing from the prophet, Willard set out as a missionary to convert others. When the church decided to send a party

of missionaries to England, Willard asked to join them. His mission in England lasted four years, where he was part of an amazing success story where thousands were converted and many of them emigrated to join their fellow Latter-day Saints in America. Willard also got married for the first time, to the daughter of a minister, and in 1840 he was ordained an apostle, joining the upper echelons of church leadership.

Returning to the United States in 1841, Willard and his wife settled in Nauvoo, Illinois, where he served as a member of the city council and as an editor of the LDS church-sponsored Times and Seasons newspaper. Joseph Smith appointed Willard as the church historian and as his own private secretary. In his role as church historian, Willard wrote a substantial part of what later became the official church history. Though called “Dr. Richards,” a mark of the esteem in which he was held, Willard rarely had the time to practice medicine. The Saints respected learning, though many of them had only limited educations of their own. The church leadership began practicing polygamy in secret and Willard married a pair of sisters as his second and third wives. In 1844, Willard was with Joseph Smith and Hyrum Smith in Carthage Jail when the prophet and his brother were murdered. He wrote a moving account of the death of his prophet.

Brigham Young became the new prophet of the Saints who elected to follow him away from the mobs in Illinois, across the Great Plains to a new promised land in the Rocky Mountains. A hymn written during the trek west summed up the hopes of the Saints, their longing for refuge from persecution, and their longing to come closer to God:

*We'll find the place which God for us prepared,
Far away, in the West,
Where none shall come to hurt or make afraid;
There the saints, will be blessed.
We'll make the air, with music ring, Shout praises to our God and King;
Above the rest these words we'll tell –
All is well! All is well!*

Willard traveled to Utah with the first party of pioneers, but returned to Winter Quarters in Iowa to bring his family back the following year. Settling in Great Salt Lake City, Willard was called to serve as second counselor to Brigham Young. Willard also served in the territorial government, as postmaster of the new city, and he worked as the first editor of the church-sponsored newspaper, *Deseret News*. Having struggled with sickness all of his life, he died in 1854 at the age of forty-nine, leaving ten wives and numerous children.

For his family, Willard Richards had set an example of public service, church service, and service in the healing arts. Five of Willard's sons lived to become adults and three of them became medical doctors, though, unlike their father, they were conventionally trained in colleges in the eastern United States. The tradition continued, since among Willard's grandchildren and great-grandchildren were numbered more than thirty doctors of medicine or holders of other doctorates. In 1980 a scholar noticed that except for a six-and-one-half-year gap, men of the Richards family (descendants of either Willard or his siblings) had served as General Authorities of the LDS church continuously since 1840, making them one of the leading families of the Latter-day Saint community.

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Paul's Father

On January 25, 1847, Willard Richard's second wife, Sarah Longstroth, bore her first child at Winter Quarters, Nebraska. Winter Quarters was an encampment site during the winter of 1846-47 for the Latter-day Saints who were awaiting favorable weather conditions to allow them to continue a trek from Nauvoo to the Great Salt Lake Valley. Despite being born in such arduous circumstances, the son thrived and was the first of four children, all of whom lived to adulthood, a remarkable run of luck for a time when most families could expect many of their children to succumb to childhood infectious diseases. That first son became his father's

namesake, Willard Brigham Richards, Jr. He grew up in Utah, on the eastern slopes of the Great Basin, and in 1877 the thirty-year-old man married Harriet Ann Fairbanks Doremus (who went by the name of Annie), a month after her sixteenth birthday. He was a little older than was common for a first marriage in that time and place, though her marriage at that age was not uncommon.

The new couple moved to Mendon, Utah, on the western side of Cache Valley. Their home was a two-story rock house in the heart of the small town and their little farm of thirty-five or forty acres was only about a block and a half away. The little plot proved very fertile when irrigated. They also owned 215 acres of dry farm land and 160 acres of mountain pasture land in Mendon. Their first child, a son named Willard, died at birth, but the next three children, also sons, thrived. The parents gave the second child the same first name as the first child, since it was the name also of his father and grandfather. Willard Brigham Richards, Jr., was called "Willard B." The next two children were named Preston Doremus and Albert Zabriskie.

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When Willard B. was six years of age, his parents decided to move back to Salt Lake City, where their children could get better schooling. Willard, Sr., had also raised a race horse named L. C. Lee, which had won many of the races in northern Utah and he wanted to try for the title in Salt Lake. With these considerations in mind, he visited the capital city and looked for a home where he would have plenty of room to raise his family and also be conveniently close to town. He found an eighteen acre lot, with a seven room house and a work shop with some sheds, four miles out on Ninth East in Sugar House, then a rural part of Salt Lake City. After several months of negotiations with the owner, Willard traded his home and irrigated farmland in Mendon for the Sugar House property at 1935 South and 900 East and moved to Salt Lake City in March 1885. The family retained their dry farm land and pasture land.

A lifelong friend of Annie's came to live with the family while Annie was pregnant with her last child. Six days after the birth of the daughter, Annie died. On her death bed she gave her baby to her friend, and said, "Take good care of my baby." Her friend, Mary Louisa Snelgrove (who went by the name of Louie), remained with the family to take care of the new baby, named Alta Mae, and the other children. After waiting for a year after the death of his first wife, Willard married the 32-year-old Louie in 1889. Because of his first wife's death before his second marriage, this was not a polygamist household, as was common at that time in Utah, especially among the Latter-day Saint upper class that the family belonged to. Only a year later, in 1890, the LDS church began the painful process of suspending the practice of polygamy.

A year later twins were born, with one dying immediately and the other living. Another daughter followed a year later, though she died before reaching one. Then on November 25, 1892, a son arrived. They named him Paul Snelgrove Richards. Paul was the youngest child in the blended family until he was ten years old, when another daughter, Martha, was born. Three years later, the last addition, a daughter named Louie Gill. Her mother Louie was forty-nine years old. These two girls were called "The Little Girls" by the family. Paul was close to his siblings. Though the proper terminology would characterize his older siblings as half-brothers or half-sisters, that is not how the family viewed it. They were full brothers and sisters.

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In 1892, when Paul was born, Utah was on the verge of the transition between a territory and a state. Statehood came late, on January 4, 1896, because of the controversy over polygamy and Latter-day Saint reluctance to completely submit to American mores and legal standards. Paul was a child of privilege, coming from a socially prominent family with obvious economic means. Family lore describes the finances of Paul's father as damaged in the Panic of 1893, but he managed to later recover.

A Sickly Child

In his "Memoirs," Paul remembered a delightful childhood of privilege, but he had certain physical and emotional challenges that shaped his personality and his later approach to living life. The doctors called his sickness inflammatory rheumatism. Red spots appeared all over the lower part of his body and sometimes the spots would extend as high as his armpits. These spots were accompanied by sore throat, fever, chills and bloody urine. Such spells confined him to his bed for six to eight weeks at a time. He experienced siege after siege for several years, which resulted in loss of time in school. Paul also suffered from stammering; he could not complete a whole sentence with ease. These two problems made him feel inadequate and insecure. The only encouragement he felt came from his mother and the "wonderful" cooperation of his whole family. They looked out for him and did whatever they could to help. Uncle Steve Richards, their neighbor and doctor, was also a pillar of strength who did all he could medically.

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The children were all taught to work, but after a bad sick spell, Paul could not do heavy work outside, so he stayed in the house with his mother. She taught him to iron, dust, sew on buttons, cook, churn, make bread, and do all the indoor fundamentals. As he got stronger, his father took him outside and taught Paul all the outdoor fundamentals. He learned how to half-sole shoes and put heels on. In woodwork he learned how to shingle and mend roofs, put up shelves and partitions, mend fences, and put on additions to sheds. His father helped the children make their own toys, such as wagons, sleds, stilts, and the like. Paul learned gardening, how to prepare the soil, plant the vegetables, water them, and harvest them. He learned how to transplant trees, prune, spray, bud, graft and take care of fruit trees; how to harvest and store fruit; and how to make apple cider and vinegar and store them. He acquired a lifelong love of gardening from these activities.

His father taught the male children blacksmithing at his old forge. The boys could shoe horses, make chains, form hooks and eyes for fastening

the barn doors, and take the rims from the wheels of the buggies or wagons and reset them. They could mend and make parts of the harness, and knew how to care for farm equipment. The wheels of the family rigs were covered with burlap and kept wet in summer to prevent them from falling apart and the rigs were protected in the winter by putting them in the sheds away from the rain and snow. Their father's unusually good judgment of animals and his love for them gave the boys an intense interest in livestock. They were taught how to judge animals, how to breed them, and how to care for them when sick.

Paul remembered one day when his mother and he were home alone and the cow got in the lucerne patch and became bloated. Paul led the cow down to the barn yard and called his mother. In those days, the method of treatment was to stick a knife into the cow and let the gas out. Neither of them wanted to do it. His mother placed the knife in the right spot and said, "I'll hold the knife and you push it in." The mother and son did their best, but poor Bossy died. The family all mourned her loss. The animals were almost like members of their family.

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Paul recalled later that he was impressed with the family's practical attitude towards sex. The children learned of it in a natural way through the mating of their animals and chickens on the farm and through the cross pollination of their fruit trees and flowers. It seemed just a part of life and sex was never a great source of curiosity to Paul. The most outstanding memories of his youth were the practical things his father and mother taught him and the great love and understanding they had for the needs of childhood and youth.

Childhood

Paul retained vivid memories of food production at the family home during his childhood. The family raised horses, pigs, cows, rabbits, chickens, turkeys, and at times sheep and ducks. Paul loved the chickens best and enjoyed making the little lath coops for the hens

and their new broods. He made an incubator once and kept it heated with the family coal-oil camp stove. Although the little chicks pecked holes in the shells, they were not strong enough to break through. Years later when he was a medical doctor in Bingham, he made a successful incubator for premature human babies.

The family raised, canned, and dried all kinds of fruits and vegetables: apples, pears, cherries, apricots, plums, red currants, yellow currants, black currants, raspberries, strawberries, cantaloupe, watermelons, carrots, beets, potatoes, corn, cucumbers, squash, tomatoes, lettuce, peas and other vegetables. They also raised winter watermelons which they stored in the hay loft under the hay to keep them from freezing. The family usually ate their last watermelon on New Year's Day.

30 A neighbor ran a flour mill a little north of their place on Eighth East and he ground their wheat. The wheat came from their farm in Cache Valley and was ground into two kinds of flour, graham and white, put in fifty and one-hundred-pound sacks, and stored in large tin-lined bins. The family used about one-and-a-half tons of flour a year. The mill was later turned into a school. Paul attended the Old Mill School with Miss Libbie Edward as his teacher. He retained fond memories of her, thinking that she was a wonderful person and a splendid teacher; she influenced Paul's life and the lives of many others of her students.

Preparing for the winter was an all-summer job. They dried apricots, peaches, apples and plums. The fruits with stones were washed and cut in half, the stones removed and then cut into quarters; but the apples were peeled and cored before being cut into quarters; finally each quarter was cut in half. The family had peelers which turned by hand and were much faster than peeling with a knife. One of the children often peeled while two or three cored and cut the apples.

The roof of their father's work shop had a slight slant, and the family spread sheets on it and laid the fruit out carefully by hand so no two pieces touched. Mosquito netting laid over the top protected the fruit from the flies. Sizeable rocks placed on the edges every few feet apart prevented the sheets from blowing away. The fruit was allowed to dry in the sun for several days. The family paid attention to the weather and if the slightest sprinkle of rain threatened, they scrambled up on the roof, picked the sheets up by the four corners and got their precious fruit under cover. When the skies were clear again, the sheets were taken back on the roof, and the fruit spread out and carefully covered with mosquito netting as before. Paul was amazed by how many bushels of fresh fruit it took to fill one flour sack with the dried product.

Hundreds of jars of fruit, jellies, and pickles were put up during the summer and fall. The jams, apple marmalade, catsup, and chili-sauce were made in a forty gallon brass kettle which hung on a tripod over an open bonfire. It held three and a half bushels of fruit at a time and it took many hours to cook. Paul's father made a stir stick with a long handle, which the children took turns operating. The fruit had to be stirred constantly. When they got a late start, still the job was completed by moonlight, or lantern light. Many times the children were stirring at midnight. Paul rested on a cot near the kettle between his turns at the stir stick. They stored their jams and pickles in five- or ten-gallon stone crocks. Their chili sauce and catsup were put in half-gallon glass jars.

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One of the most constant jobs in the summer and fall for the children was picking up apples. About thirteen acres of their land was planted with apple trees and the rest was in alfalfa, nursery trees, a small fruit orchard, a garden space, and a large barnyard that was used as a playground. Paul's father was very particular about spraying the fruit trees several times each spring and during the early summer. Nevertheless, wormy apples still fell to the ground, which the children picked up and fed to the animals. After a bad windstorm, the ground would be covered with all kinds of apples to be collected

and sorted by the children. The good apples were put in boxes to be sold for about twenty-five cents a bushel as "wind-falls." The more bruised ones went into the dump cart and were taken to the cider mill to be washed, ground, and pressed. The badly bruised and very ripe ones were fed to the horses and pigs.

Each child had to pick up a dump cart of apples, which held about ten bushels, before they were allowed to play. Paul remembered collecting apples as a fun activity since the children raced each other to see who could get done first. The children had apple fights and learned to throw fairly straight. Each one got a strong willowy stick about two or two-and-one-half feet long, stuck it through an apple and then swung it around several times and let the apple go. Other children ducked behind a tree when the apples began to fly. The fast apples really smarted when they hit. If they saw their father coming, all playing ceased and the boxes and cart were filled in a hurry.

32 In the fall the family prepared for the winter by storing their potatoes (thirty to forty bushels) and carrots in the root cellar and picking winter pears and apples and storing them in the fruit cellars. They had two fruit cellars, a large one in the upper orchard and a smaller one under the granary near the house. The smaller one was for family use and the larger one for storing the apples they intended to sell. This cellar was several hundred feet long and had large open bins one above the other. In years when the crop was good, the family stored about two thousand bushels of apples. It was quite a job to care for them as they had to be sorted every few weeks. The children all helped with this task. Every box was carefully handled to see that no spotted apples were sold. The speckled ones were taken to the house to be used in pies, puddings, and fresh applesauce, which was a favorite with the whole family. They often sent some to the neighbors.

The pigs were butchered and cut up. The sides for salt bacon were put in the salt bin. The hams and shoulders were sent to the smoke house to be cured and some were put in brine to be made into corned pork.

The smaller pieces were put through the sausage mill for sausage, and some were saved for scrapple. From the heads, Paul's mother made head cheese. His father did not kill the calves himself, but sent them to the butcher to be dressed and cut up.

The family stored their cooking eggs in water glass (sodium silicate), and they had enough dry yeast on their shelves to last all winter. Their sugar was purchased in one-hundred-pound sacks and they bought twenty-pound round cheeses in wooden boxes. They got their milk from their own cows, and raised plenty of chickens for their own use. Each week they churned their own butter.

The north end of their hay barn was lined with sawdust and made into an ice house and in winter the family stored ice for summer use. Paul's mother made lots of ice cream and it was handy to have ice available. They had both a six-quart and a four-quart freezer, and often she filled both in one day. The children who turned the freezer had the privilege of licking the dish. Paul always did his share when he was well. Pumpkins, squash and the like were also stored in the hay barn.

33

As the family grew, the house grew with it. The original kitchen became the living room when Paul's father added a dining room, a kitchen, three bedrooms for the older boys, and a closed-in back porch where they kept their washing machine and ice box. The family all sat down together for meals at a large extension table in the kitchen. A silver caster with a bell on top was the center piece on a red checkered tablecloth. At each place was a napkin encircled with a silver ring individually marked. At the end of the meal, each child folded his napkin and placed it back in the ring, ready for the next repast.

Paul's father sat at the head of the table with Paul's mother on his right and Willard, the oldest child, on the left; Preston and the others sat around according to age so that the youngest was next to Louie. The food was placed on the table in large bowls and the milk in a large white pitcher. The food was blessed and passed, each helping

themselves. Although the children were allowed all they wanted to eat, their mother often said, "Don't let your eyes be bigger than your stomach because you know we believe in the gospel of the clean plate." The children had to eat what they took or it was saved for the next meal. Nothing was wasted and they all learned it was better to have seconds than to overload their plates. There was no dessert until their meat and vegetables were eaten.

The meals were very orderly. "Please" and "thank you" were essentials in the home. They were encouraged to express themselves, but each took his or her turn. If they got the giggles or raised their voices so as to cause confusion, the father rapped on the table with his knife handle and said, "If you can't behave, please leave the table." Paul remembered that the errant child either behaved or left with no argument.

34 Ten were seated at the table each day until their cousins Louie, Clifton, and Leon Davidson came to live with them, and then they were thirteen. If a friend dropped in, the chairs were pushed a little closer together, and another place was set. This was a frequent happening at the house. All were welcome. One might wonder how so many could be brought together for a meal. The old dinner bell took care of that. Approximately fifteen minutes before dinner was served, one of the children stood at the back door and rang the bell vigorously. The sound carried to most parts of the lot and no matter where the children were or what they were doing, they all ran to the house and washed up in order to be ready to take their place at the table on time.

When the children got older and were allowed to stray farther from home, the bell was replaced by a train rail about three feet long hung by wire from the limb of an old apple tree that grew at the side of the wash house. (Later their father made the wash house into a play house for the little girls). The family called it the gong, and it could be heard for blocks when struck with an iron rod about one inch in diameter and two feet long. The neighbors always knew when it was dinner time at Uncle Willard's.

Much of their entertainment was of their own making. In the winter they played fox and geese in the snow. They rolled large snowballs and made snowmen that lasted for days. Pieces of coal were used for the eyes, ears, nose, mouth, and also for the buttons down the front. An old hat was placed on the head at various angles and the children felt that a work of art had been completed. Often they divided into groups and competed with each other to see who could make the largest and best-looking specimen.

The children pulled one another around on the sled and did a lot of coasting. A favorite sport with all was skating on the old canal at the upper end of the lot. Paul felt that they could skate for miles. Even if the ice gave way, the water was too shallow to cause danger. Their father's instructions were to hurry home when the glow from the setting sun showed in the west and the children rarely disobeyed.

Often Paul's father would say on a Saturday morning, "Hurry, get your work done, and we'll hitch up and go down to the church farm pond for a skate." They soon filled the bobsleigh with their friends and a big basket containing lunch, and with the sleigh bells jingling merrily they drove several miles to a spot that they all loved. Paul's father and Uncle Alma Pratt usually accompanied them. They built a bonfire on the edge of the pond so they could warm themselves if they got cold. The adults taught the children how to hold a blanket between two of them like a sail and let the wind carry them over the ice. The children loved to play pop the whip with Paul's father or Uncle Alma on the end. Paul remembers that it was such a good healthful sport and so much fun.

35

In the summer the family dammed up Parley's Creek, which ran through their farm, and went swimming. They played run-sheep-run, stink-base, tippy, kick-the-can, steal sticks, hop scotch, purg, marbles, ball, jump rope, mumble peg, and many other games. Their barn yard was the ball ground and marble center for the whole neighborhood. Boys came from all over Sugar House to play there.

Many times Paul's father counted forty or fifty boys on his lot. In those days the streetcar stopped at the front gate of each home and the car conductors called their place "Kid Town."

Many windows were broken, but Paul remembers his father replacing them with no complaints. He was so happy to have his children at home and he welcomed all their friends. He was a good disciplinarian and if any child on the lot failed to go when his parent called or sent for him, he was barred from coming over for one week. Any quarreling or rough talk was treated in the same manner.

36 The children all learned to ride horses when very young and horseback riding became a favored activity. The old granary steps, about four feet high, became the loading station. The smaller children stood on the little landing at the top of the steps and as the rider came in from his or her trip up the lane to the upper gate, he rode up close. As he got off, the next rider got on. When the horse left with his precious load, the rest of the kids sat on the little platform and kicked their heels against the sides and sang songs and laughed. The waiting was as much fun as the rides. Paul recalled that just closing his eyes in his old age allowed him to hear the rhythmic beat of the heels against the boards. Old Dolly was very tame and knew where she was to go. Oh, but she seemed big, and Paul was such a long way from the ground when he climbed into the saddle.

Paul's childhood memories would not be complete without mentioning the neighbors and relatives who lived with his family. To the north was Daniel Kimball's family: Don Carlos, Ernest, Pearl (who died in childhood), Louis, Lester, Vivian (later called Charles), and Katie. Their ages corresponded quite closely to the ages of the Richards family, from the oldest down to the younger children. Paul's brother Preston and Ernest Kimball were especially close. Mrs. Kimball died when Paul was quite small and Paul's mother took that family under her wing, so to speak, until Mr. Kimball married again.

On the south lived Aunt Martha Davidson, Louie's sister, and her family. Aunt Martha died before Paul was old enough to remember her. Uncle Willie tried to keep the family together, but being a sheep man often kept him away from home. In his absence the three children, Louie, Clifton, and Leon, were under the guidance of the Richards' home and were considered part of the family.

Next to Uncle Willie's home on the south was that of Uncle Steve's (Dr. Stephen L. Richards) and family. The children were Stephen L. (later First Counselor to the President of the LDS church); Alice, who died in young womanhood; Claude; Gill; Stayner; Willard; Russell; and Grace. The age brackets of that family fairly well matched the age brackets of Paul's. Paul and his siblings grew up with these three neighboring families, closely knit together with strong bonds of affection and common interests.

Paul recalled some regret when he looked back on his relationships with these friends and relatives. His serious childhood illness interfered with his ability to keep up with the group, either in terms of education, physical ability, or even when just playing. Paul thought that this led to an inferiority complex that made him feel he did not have the capacity to compete with children of his own age. This feeling extended into his young manhood, when some of his professors and colleagues helped him to gain confidence in himself, and gradually he freed himself from a state of depression brought about by his perception that he was not equal to his contemporaries.

37

As Paul reviewed the lives of these four families, he realized that they were always very congenial with each other. He recalled no jealousies and all freely participated in all of the activities. Paul's family home was usually the place of gathering for pleasure as well as for other activities. Lester and Charles of the Kimball family were in Paul's age bracket. Paul later served part of a mission for the LDS church in Scotland with Charles. The two men labored together for one year and Paul found him to be a very fine young man and a stalwart friend and companion.

In Uncle Steve's family, Russell was near Paul's age and a great favorite of Paul's. He was mechanically minded and very clever at making things. Paul longed to be able to be as accomplished with his hands as Russell was.

Leon and Cliff Davidson were always very close as playmates as well as in their family relationship. Paul always appreciated the part that they played in his life. When financial difficulties overtook the Davidson family and they lost their home, Paul's father invited them to move into the old Orchard House, which they did so until their family circumstances changed.

The Orchard House

38 The old Orchard House was built in the 1890s by a man that Paul remembered as Mr. Hall. It was located in the center of the apple orchard, and when Mr. Hall moved away, it became a great rendezvous spot for many people. When she had small children, Paul's mother planned their parties there, and with the aid of an old hand organ they danced and had many good times. As the children grew older, it was used as a clubhouse. Paul's older brothers formed a club called the B. H. Roberts Debating Society, named after the noted LDS scholar and general authority. They met regularly and strove to develop intellectually.

When an epidemic of scarlet fever broke out at the home, those children who did not have the disease were placed in the old Orchard House. Paul remembered how cold and barnlike the house was when the children came home from school. The children heated it with small stoves that could not maintain a fire all day. After getting the fires going again, warmth and cheer soon returned, and the children had some good times during their exile.

One of the more interesting things about the Orchard House was a big grate in the large room made of copper that had a small warming

oven on each side. When the grate was well fired, the family could put out the lights and the fire was sufficient to illuminate the whole room. This grate was later added to the collection of the Sons of the Utah Pioneers.

The next room on the south was the old conservatory, or hot house, all constructed of glass. It had a heating system with hot water pipes running beneath the flower beds. While this was never in operation during Paul's recollection, it was an intriguing place to him and gave him a great desire to have a hot house in connection with a home. He always felt that it would be wonderful to have a place connected with his bedroom so that when sleep was elusive he could get up and garden. This desire remained with him through the years but was never realized. When Paul looked back and thought of all those windows in a vacant house, it amazed him that practically none of them were ever broken.

The Halloween parties held in the fall of the year were among the most outstanding of Paul's memories of the old Orchard House. One group decorated and fixed the place up and then often four or five other groups proceeded to plan parties. Sometimes people got their dates mixed and attended the wrong party. Very funny things happened on those occasions and the family had some good laughs. They placed jack-o-lanterns leading from Ninth East to the fun house, located over a block away and back among the trees. Ghosts and goblins lurked behind the tree trunks and corn stalks were placed in various positions as an outdoor spook alley.

39

Paul remembered vividly a party at the house when he was in high school. The whole class came. They set up a ladder going up the east wall and then one going up the east gable of the roof. Witches and elves nipped at the legs of the guests as they ascended. On the top, by the chimney, was a fair-sized platform where two ghosts stood. The ghosts seized each victim, sat him or her in a large pan and pushed

them down the other slope of the roof. They had no idea where they might land. With a jerk on the rope, tied to the handle of the pan, out went the occupant and they landed on a flat pebble roof. The squeals were hilarious, as were the apprehensive moans of those coming up the ladder. From the pebble roof, they climbed down a ladder to the ground and then through a low window into the kitchen directly under the flat roof. This room was dark and had been fixed up as a witches den with all kinds of slimy things which were passed around from person to person.

Between the kitchen and dining room were three steps. A barrel with both ends taken out was placed in the doorway at the top of the steps and everyone had to crawl through this to get into the party. When the guests were nearly through, two ghosts took them by the hands to help them to their feet and a mild electric shock went through their whole body. The laughter and squealing were equal to that heard on a roller coaster in any amusement park.

40

The night they had their party one of the ladies from the Pleasant Hour Club group got the dates mixed and she joined the wrong party. She was quite large and when going through the barrel she got stuck. The other people could not get her forward or backward. Every time the ghosts took hold of her hands, she gave a terrible scream. It took some time to extricate her. Paul was sure that the kids attending that party would never forget it. It was the talk of the school for many weeks.

The Orchard House was torn down in 1911 by Paul's brother-in-law, Alf Gunderson, on his return from a mission to England. He used the lumber to build a home for Paul's sister Alta. About that same time, when Paul was eighteen years old in 1910, the old homestead was subdivided and five houses came to occupy their former front lawn. Paul's sister Joy eventually made the old house on Hollywood Avenue into her home and Paul often visited in the last years of his life, since his clinic was virtually just across the street.

The Canyon Home

Their canyon home filled one of the most cherished spots in Paul's memory. His father bought eighty acres of land up Smith's Fork, just off Parley's Canyon. In the early days the family called the place "The Old Arm Chair," named for a large rock formation on the top of the mountain that looked like a grandfather's chair. Now the canyon is called Mount Aire. The family land was approximately two miles from the main road in Parley's Canyon, and for the first year or two, they left their wagon at the mouth of Smith's Fork and all walked the two miles, except for his mother. She rode a horse and the family's food, bedding, and clothes were packed behind her saddle and on the second horse. Every child carried a small package or bundle, and those few pounds became exceedingly heavy before they reached their destination.

At first the family used a dugout built by Uncle Alma Pratt, but when the road was fixed and became usable for wagons, Paul's father built a log cabin. Uncle Alma and the boys helped him. Paul's mother felled the first log after Willard chopped the tree almost through and she completed it. The log was marked by carving August 1898 in the bark. The children enjoyed showing their mother's log to their canyon guests. The cabin, fourteen feet wide by twenty feet long and covered by a dirt roof, was completed in 1899. Paul remembered lots of good times in their primitive home.

41

A few years later, Paul's father and Willard B. dismantled Grandma Longstroth's old home on Richard's Street, moved the sections into the mountains, and reassembled them on a canyon lot near the log cabin. A kitchen, dining room, and screen porches were added to complete what the family called "The Big Cottage." As of 1958, when Paul died, it still stood.

Family and friends all loved to go to the canyon, and family members took turns having their particular crowd up for a weekend of fun and

recreation. There were certain rules they had to follow. All had to stay together; there was no slipping away from the crowd. If this rule was disobeyed, the ones who could not conform were disqualified from another invitation to the canyon home. Moonlight walks and climbs were favorite sports. The children always took an older person who knew the trail with them, since it would have been so easy to get lost in the dense underbrush. The children often arrived back at the cottage with the soles of their shoes tied on with string, elastics, a handkerchief, or anything they happened to have with them. Looking back, Paul wondered how his mother and father managed to be so calm and good natured.

Willard's Influence

42 One of the most striking characteristics of Paul was his strong work ethic, which he attributed to his upbringing and especially to the guidance of his oldest brother, Willard B., who was thirteen years older. In reminiscing, Paul felt that Willard B. had been like a father to him. Willard B. had taught him an approach towards living, one of systematic effort, that enabled Paul to excel throughout his life. When Paul drove a team for Willard B., they always did more work than the other teamsters. If others hauled three loads of gravel, the two Richards hauled four. If others went to work at eight o'clock, the two went at six. They always did more work than the average man. Paul did not feel that he was above average, but his accomplishments accumulated because he worked harder. He believed that an average man can accomplish anything if he will put forth enough effort. He will accomplish more than a brilliant man who puts forth less effort, but an average man can never overtake a brilliant man who puts forth the same amount of effort. Work was no trial to Paul. He loved work. It brought him the joy of accomplishment and established for him a pattern of life that brought forth results in whatever occupations he pursued.

Peddling Apples

When Paul was very young, his older brothers, Willard, Preston, and Briskie, peddled apples all over town. In the evening the day before, the fruit was picked, put in bushel boxes, packed in an "old white top" and covered with a canvas. This was done in order to get an early start the following morning. The boys had their breakfast, hooked up the team, and were on their way by six o'clock, thus arriving in the section of town where they intended to work by seven o'clock. One of the boys stayed with the wagon while the others knocked at the door of each house and tried to sell the apples. They carried bushel boxes, and half-bushel, peck, and half-peck measures.

When Paul was well enough, the older boys often took him with them. The older boys accommodated the youth and sickness of Paul. At first Paul stayed with the wagon and when fatigue overtook him, he remembered vividly crawling into a bushel box and going to sleep.

Later Paul was allowed to peddle. The boys taught him how to present himself in an endeavor to make a sale as he went from door to door. Learning to approach people was hard for him, but it helped in later life. One of the fond memories of peddling came from going to the old cracker factory and purchasing ten cents worth of broken crackers, which when combined with a piece of cheese and a few apples, became their lunch. Paul remembered well the old watering trough at the southwest corner of Liberty Park; the flowing well kept it full at all times and on their way home they always stopped and watered the horses.

Years later when Paul lived in Bingham, he recalled these memories. In about 1944 he operated on the wife of Judge Straup for an abscessed gall bladder. Following the operation she became very toxic and delirious. On the third day, as Paul entered her room she stared at him with a semi-delirious expression and said, "Those eyes look exactly like the eyes of a little boy who used to peddle apples to me."

She had never mentioned this before but in the semi-consciousness of her delirium she had recognized him. He had knocked at her door many times in the first decade of the century.

Mission to Scotland

By the age of nineteen, Paul had attended less than two years of high school and struggled with a persistent sense of low self-esteem. Some winters he spent in California, where he received no schooling. When he did go to school, his grades were mediocre. At this point in his life, when he had no plans for the future, the LDS church leadership chose to call him on a mission. Uncle Steve and Dr. Gill recommended against the rigors of a mission, but his mother said, "I want him to have a mission and if the Lord wants to take him, I will feel all right about it." His cousin, Steve Wilcox, was also called on a mission. They were both assigned to the British Mission and made plans to travel together.

44

On Friday, June 16, 1911, Paul went to the temple with his cousin to receive their endowments. This sacred ceremony recognized them as adults in the LDS church and was an important requirement to go on a mission. That evening a farewell social celebrated this new phase of his life. Paul began writing a missionary journal the same day.

The following day they visited the office of the President of the LDS Church, and Charles W. Penrose, a 79-year-old apostle originally born in London, set Paul apart as a missionary. Paul also received a Minister's Certificate to carry with him, authorizing him to "preach the Gospel and administer in all the Ordinances thereof pertaining to his office and calling." Since he was going abroad, Paul had earlier received a document from the Bureau of Citizenship, Department of State, that declared that he was a citizen and described him as nineteen years old, five feet and eleven and one-quarter inches tall, with a broad forehead, brown eyes, "large & crooked" nose, large mouth, square chin, "very dark brown" hair, dark complexion, and a "medium" face.

The rest of Saturday was spent packing his trunk and visiting with relatives and friends. On Monday, June 19, Paul rose at 4:30 in the morning and took a trolley car to downtown Salt Lake City to the Oregon Short Line Depot, where he met Steve. At 7:05, the train left the station, bound for Chicago by way of Omaha. Because of his visits to California, Paul was better traveled than most of his contemporaries in Utah. As with many who served church missions, his horizons were about to be substantially broadened by exposure to new experiences and new people.

The world of 1911 was only three years short of the opening of the First World War, but in that springtime before the nations of Europe attempted mutual suicide, the people of the world felt that their planet was growing ever smaller. Newspapers brought news from around the world, relying on the extensive telegraph system of land lines hanging from poles and passing through undersea cables that now covered much of the world. The telephone was also becoming pervasive. In the time of Paul's father, the world still had unexplored areas on the map. That was no longer true. Two years earlier, the American Robert E. Perry had reached the North Pole, and later in 1911, the Norwegian explorer Roald Amundsen reached the South Pole. Other than a handful of mountaintops, some isolated mountain valleys in New Guinea, and the terrain hidden by the oceans, explorers had reached every part of the globe.

45

In Chicago, the two young men checked into the Majestic Hotel, then spent the rest of the day touring the city with the Sears family in their automobile. The following day, a Friday, included a tour of the famed Chicago stock yards and slaughter-houses of Swift & Company. The two missionaries accompanied "Norma and a friend" to the theater in the early afternoon, followed by more sightseeing, including a visit to the University of Chicago. Paul's older brother Preston, nicknamed Penn, had attended the University of Chicago. After this whirlwind visit, the two missionaries left for Pittsburgh at about 9:00 in the evening.

Having visited the meat-processing capital of America, the two missionaries reached the steel capital of America on Sunday. A "Miss Sears and a friend," apparently another branch of the same family, met them at the station at 4:00 in the afternoon. A visit to the Sears home and more sightseeing quickly followed. Paul left the city on a 10 p.m. train, leaving Steve behind to continue his visit.

On Monday, Paul arrived at the nation's capital. His brother Penn met him at the station and took him to the YMCA to clean up. More sightseeing followed, as well as visits with family and acquaintances. Utah's congressional representative at that time was Joseph Howell, having come to Washington, D.C., in 1901. Penn was to marry Barbara Howell, the representative's daughter, in the following year.

46 Paul visited the sights in and around Washington, including the Washington Monument and Mount Vernon. On Thursday, Steve joined Paul in Washington. Representative Howell included Paul in a visit to the White House on Friday where Paul met and shook hands with President Taft and toured the White House. On Saturday, the two young men continued their journey by taking a short train ride to Baltimore, where yet another family friend, Dave Anderson, put them up in his lodge, and they spent the evening at a large summer resort. Sunday brought them to New York City and lodgings at the Herald Square Hotel. After more sightseeing, including the large parks that New York was famous for, they checked in with the LDS New York Mission headquarters on Tuesday.

On Wednesday, July 4, they went to Coney Island, and the other missionaries went bathing. The country was going through a heat wave, with deaths from heat waves being reported on the front pages of newspapers. Paul described the weather as "about one hundred and ten in the shade" and mentioned the deaths from the heat in his journal. On Thursday, the young men visited the highest building in the world, the Metropolitan Life Building, fifty stories and seven-hundred feet high, finished only two years earlier.

On Saturday, July 8, 1911, Paul, Steve, and three other missionaries left New York City on the White Star Line passenger liner *Celtic*. From her launch in 1901 until 1903, the *Celtic* was the world's largest ship, at seven-hundred feet long. Smoke belched from her twin funnels as she consumed 260 tons of coal a day. The second day at sea was Sunday and Paul attended services offered by the Church of England, his first experience of services with a church other than his own.

Having left a heat wave behind, Paul was surprised when the Atlantic weather turned rough, leaving him somewhat queasy and passengers on deck wearing their overcoats. Waves even occasionally washed over the deck. After a short stop at Queenstown, Ireland, in which only passengers bound for Ireland left the ship, the *Celtic* arrived in Liverpool on July 16. The headquarters for both the European Mission and British Mission were in the port city.

Later-day Saint missionaries first arrived in Great Britain in 1837 and Scotland in 1839, found they the British Isles to be a fertile ground for converts, especially the areas near Liverpool. His grandfather, Willard Richards, had also served in this same mission location. Some estimates indicate that one quarter of all the Latter-day Saints converted in the first fifty years of the church were in the British Isles. The overwhelming majority of converts left their homes and traveled to the United States to gather with other Saints, first in Nauvoo, Illinois, then in the remote refuge of Utah after the Saints were driven from Illinois by mobs. Britain was still fertile missionary ground when Paul arrived, though not like in the times of his grandfather. Paul was one of 146 Latter-day Saint missionaries serving in the British Mission at this time.

47

Paul learned that he was assigned to "labor in Scotland," while Steve would work in England. Three days after arriving in Liverpool, and after some requisite sightseeing, Paul took the train for Edinburgh. Unlike the longer train journeys in the United States, the journeys in England were much shorter. He left at 9:05 a.m. and arrived at

his destination by 3:00 p.m. Steve traveled with him and returned to Liverpool two days later.

The 1911 Britannica Encyclopedia described Edinburgh as “undoubtedly one of the most picturesque capitals in the world.” The capital of Scotland had been built on the site of ancient Roman forts along the southern shore of the Firth of Forth. The city was older than anything Paul could have experienced in the New World, giving him the experience of the historical depth of centuries, rather than the historical depth of decades he was accustomed to in Utah. The oldest building in the city was St. Margaret's chapel, built in the twelfth century.

48 The city was also impressively modern. Industrialization had grown the port city from a population of 66,544 in 1800 to a population of 293,491 in 1911. Of course, as was common with other industrialized cities that relied on coal for heating, an ugly cloud of smoke often obscured parts of the city. The nearby Forth Railway Bridge, an impressive steel cantilever structure supported on three stone foundations, was one-and-a-half miles long over the Firth of Forth and had been completed in 1890. At least 57 workers died during construction, a common cost for such grandiose projects. Paul visited the bridge many times and he called it “one of the great wonders of the world.”

Paul settled into the life of a missionary. He often spent the morning tracting, going from door to door, trying to interest people in the Gospel by handing out pamphlets (tracts) about the Latter-day Saints. While many missionaries found this effort tedious and discouraging, especially in the face of hostility towards uninvited visitors, Paul never complained in his journal. Sometimes he even wrote: “went out tracting and had a good time.” He usually mentioned tracting only briefly or as a positive experience, though occasionally a negative experience intruded, as when “one man wanted to do away with us.”

Paul spent his afternoons studying, and his evenings were taken up with church meetings or visits with local Latter-day Saints. While he

and other elders lived in lodgings together, visits in the evening were an opportunity for dinner and socializing. Paul did not seem to have a set mission companion, but three or four other elders lived with him, and they went about in pairs or as trios. He studied hard and his close association with the other elders helped him to feel as one of the group.

On Sunday evenings, after church meetings during the day, the elders occasionally staked out a spot on the side of the street and preached to passersby. Several weeks after arriving in Scotland, on August 6, Paul "went to hold forth on the street" for the first time. He remained a bystander, while three other elders did the talking. He was still afflicted by stammering, making him reluctant to speak in public. A week later, however, he spoke in church for the first time ever. While growing up in Utah, he either never had the opportunity to speak in church meetings; or, more likely, he avoided such opportunities. Later, the family told stories to each other about how Paul "practiced for hours down at the seashore speaking to the waves" in Scotland in order to overcome his stammering. He was successful in this effort and also felt his sense of inferiority improving.

49

Success as a missionary did not come easily. Paul never mentioned converting anyone, and apparently the closest he came was a woman named Henderson who was his first investigator. She had been found through tracting and later came to a Mutual meeting, which indicates that she was younger. He gave her a copy of the Book of Mormon on August 30, 1911, and she promised to read it. He visited her family two more times, on September 5 and September 25, but they then disappear from the journal, perhaps because the next day he moved to Glasgow.

Glasgow was twice the size of Edinburgh, forty-two miles inland as the crow flies. When Paul arrived, the Scottish Conference was part of the British Mission, and its headquarters were in Glasgow. He lived in Glasgow from September 26, 1911, to July 9, 1912, where he worked as a clerk at mission headquarters, called the lodge. Many days his journal entry is merely that he worked on "the books," making out monthly reports.

Though serving as Sunday School Superintendent and Scotland Conference clerk, Paul regularly tracted, spoke at street meetings, or went to the occasional cottage meeting. Street meetings were usually held on Sunday, though occasionally other days were used. He often remained in his lodging and spent the afternoon studying. Presumably, most of his study was based on religious materials.

Paul's life was not all missionary work; he often went sightseeing or went to stage shows, musical performances, or "the moving pictures." There were also picnics. The missionaries regularly organized the local Latter-day Saints to celebrate July 24, known as Pioneer Day in Utah, which commemorated the coming of the Latter-day Saints to Utah in 1847. He played ball and listened to singers in the park. Glasgow Cathedral impressed him with its Gothic architecture, and he visited it several times, usually when taking visitors around the city. He also went sailing down the Clyde at least twice (which probably refers to the river, rather than the coastal estuary). A visit to Britain
50 would not be complete without a couple of visits to castles, too. But he also took the opportunity to visit a cattle market and slaughter house in Glasgow, which he found very different from the similar operation in Chicago. Having grown up around farming, he was not shocked by the details of where meat came from.

On July 4, 1912, Paul was asked to move back to Edinburgh. He packed his trunk and left five days later, a short journey by rail. Two days later, Paul saw a demonstration of the largest navy in the world at that time, the "great sight" of eighty British warships in the Firth of Forth. Paul occasionally went sailing on the Firth of Forth and he enjoyed looking at the great bridge.

While he was occasionally ill, Paul's health had obviously greatly improved. On July 17, 1912, exactly one year and one day after he first arrived in Liverpool, Paul and three of his fellow missionaries set out to walk from Edinburgh to Glasgow, distributing 3,000 tracts along the way. The four young men traveled "without purse or scrip,"

a scriptural term referring to relying on the kindness of strangers that recalled the missionary efforts of the earliest Latter-day Saint missionaries, though the young men did purchase their meals rather than rely on kindness to feed them.

Paul described their start: "The tracting began and also the persecution." The missionaries took two days to walk to Glasgow. They tried to find a place to sleep during the night, but could not find any place. They stopped at a house and asked to sleep in the barn, but were refused. They rested for a while on a haystack, but it was too cold, so they pushed on; they later rested under a bridge, and finally slept a bit in the morning in a public park. Arriving in Glasgow, they had tea and slept well. Activities the next day included socializing and lawn bowling and then another night of rest before they took the train back to Edinburgh.

The next month the missionaries borrowed bicycles and Paul and his three companions set off to deliver tracts to Hawick, forty miles south of Edinburgh. The two pairs got separated, with Paul and his companion ahead of the other pair. Paul and his companion thought that the other pair were ahead of them, so they hurried to catch up, while the other pair was already trying to catch up to them. The missionaries raced through the hills of southern Scotland, and when Paul and his companion stopped for lunch, the other pair caught up. They all had a good laugh over the hard riding. Two days later, on their way back, they stopped regularly to hand out thousands of tracts. Paul's bicycle chain broke, and later his back tire burst, but both times he was fortunate to be near bicycle repair shops. Paul was also impressed when they came across a pack of one hundred hunting hounds, worth a combined 3,000 pounds, on the roadside at the estate of a duke.

51

His mission turned ugly during the following month of September. A silent film called *A Victim of the Mormons* came to Edinburgh and the missionaries went to the Coliseum Theatre on at least three different days to hand out tracts, attempting to counteract the bias

of the film. The Danish film portrays a Latter-day Saint missionary seducing an impressionable young woman with a combination of charm, hypnosis, and drugs, in order to kidnap her and take her back to Salt Lake City, where she finds that the missionary is really a polygamist. This type of film was part of a general trend to portray the Latter-day Saints not only as deceitful scoundrels, but even as villains involved in white slavery. On the third day, Richards and a fellow missionary were pursued by an "uncultured crowd" that "threw sticks, cans, and in fact anything they could get a hold of." After the movie had poisoned the attitude of the population, Paul twice recorded that he had "rather warm times" and "had some more rather rough receptions" while tracting.

52 Shortly after the incident with the film audience, Paul traveled back to England, spending some time in Preston and Liverpool. On September 23, 1912, he bicycled from Liverpool to Preston, including having a "hang on, as we called it" for fourteen miles on a large truck. About this time in the journal, Paul started to mention that he was one of those speaking when the missionaries were preaching. On October 6, 1912, he even spoke at a church conference in Glasgow.

Paul was obviously maturing, having grown healthy and now able to speak without stammering. In many ways, his mission was a grand adventure, and one of the religious highlights came on March 30, 1912, when he had the "pleasure of baptizing four souls into the fold of Christ," though Paul apparently did not convert any of the four.

Missionaries were often expected to keep a journal, a way to help themselves be more self-reflective, and it also fulfilled the Latter-day Saint desire to document the spread of the Gospel. Paul's journal shows a diligent personality, writing an entry almost every day, though the entries do not vary much, showing that the writing did not feed an emotional need to express himself in words on paper. On one spring Saturday, he wrote a short entry: "I must not have done anything this day as I have no trace of my work."

Paul returned to Edinburgh, continuing his labors, when the journal abruptly ended on November 15, 1912. He had served as a missionary in Scotland and England for almost sixteen months when an epidemic of diphtheria claimed him as one of its potential victims. An ambulance took him to the Edinburgh infirmary. This hospital kept its patients on bunks stacked three tiers high, and Paul lay on an upper bunk for six weeks in very serious condition. The doctors gave him no hope and said that if he lived they were sure he would be an invalid for the rest of his life. Only twenty years old, he was thousands of miles from home, the doctors declared his life to be close to an end, and he was "faced with the defeatism of death." He was very weak, sick at heart, and discouraged; his appetite was gone and life seemed very uncertain. His cousin Steve Wilcox came up from England at his own expense, retrieved Paul, and took him to the mission headquarters in Liverpool.

Steve put Paul to bed and called in Elder Ezra Taft Benson, Sr., the mission president (not the future church president), to help administer to the sick man. As Paul lay in bed, the president came to him and said, "My boy, I'm going to prescribe for you." The president bought a bottle of Port wine and gave Paul a small glassful several times a day. Paul began to eat a little and gain in strength. The Word of Wisdom, an LDS practice which prohibited liquor, tobacco, coffee, and tea, was thought of as divine advice rather than a divine commandment at this time.

53

At the end of two weeks, Paul was released from his mission on February 1, 1913, and carried to a ship on a stretcher. Two other missionaries accompanied him to care for him. The ocean liner was out of port only a few days when a bad storm came up. The passengers were confined to their cabins for five days, and Paul's companions were so seasick that they could do nothing for him. The air in their bunk room became foul and the stench was so sickening that Paul made up his mind to get out of there. With great effort he dressed, and by holding on to the bulkheads and railing, he groped his way to

the dining room. From then on, he began to get better. The ocean air seemed to give him strength and his appetite increased. When they reached New York, he walked off the boat by himself. That was the first real walking he had done for over three months; he weighed less than one hundred pounds.

In his "Memoirs," Paul said that he traveled home on the Lusitania, but that is not true. This was a case of the failing memory of an old man. Paul sailed home on the R.M.S. Campania, a sister ship of the Lusitania owned by the same shipping firm, Cunard Line. He sailed second class, leaving on February 8, 1913, on the run from Liverpool to New York City. We know this because in his Missionary Journal he kept a pamphlet printed just for this voyage, listing each of the "Second Cabin Passengers" by name. The pamphlet served as both a souvenir and an aid to socializing while on board.

54 J. Reuben Clark, Jr., was Solicitor of the State Department at this time, and Paul's brother Preston was his assistant. Preston came up from Washington, D. C., to meet Paul at the ship. His brother took Paul to see Dr. Harlow Brooks, a good friend of their cousins, Dr. Gill and Dr. Ralph Richards. Paul spent several days with the doctor and he underwent a thorough examination.

Paul told the doctor of his great discouragement. Dr. Brooks looked at the young man and said, "Do you want to live?"

Paul answered, "Yes, I want to live very much and I want to do something in life."

The doctor asked, "What do you want to do?"

Paul told him, "Go back on the farm. It is the only thing I know."

Dr. Brooks told Paul that his physical condition made hard farm work not possible, then he pointed out another option. "I have

looked up our school records and find that five of your family have gone through this school and made good doctors. Why don't you go into medicine?"

Paul told the doctor that he had no education. The doctor responded, "You have to take it easy physically for several years and if you apply yourself, you can catch up." Dr. Harlow Brooks was the first man to give Paul real encouragement toward a professional life.

Preston took Paul to Washington, D. C., where Paul spent six weeks with Preston and his wife, Barbara. Before starting west, Paul went to New York to see Dr. Brooks again. The doctor found that Paul's condition had substantially improved, but he said, "Your tonsils must come out as soon as possible." Paul now weighed one hundred and twelve pounds.

Soon after Paul arrived home in Salt Lake City, Dr. Gill arranged to have Paul's tonsils out. A few weeks before, Paul's sister Joy had undergone a similar operation and nearly died of a hemorrhage. Thinking that their family might be bleeders, the doctor gave Paul three shots of serum to help coagulate his blood. After the third shot, hives broke out all over Paul's body. They were the largest he had ever seen, some being as big as his hand. They were on his body, arms, legs, between his fingers and toes, in his mouth, ears, hair and on his eyelids. He was literally covered; no part of his body was untouched by them. The family was at their canyon home in Mt. Aire, so Paul was home alone with his older sister Ann. She called their doctor, Uncle Steve, and he told her to put Paul in a fairly warm soda bath. Paul collapsed. His heart would not stand it, so the doctor had Ann wring out a sheet in lukewarm vinegar water and wrap Paul in it. That gave him relief and as a consequence, Paul recommended vinegar for hives until his final days. Paul's tonsils were taken out later in the summer and his health improved markedly.

Education

After the successful operation to remove his tonsils, Paul spent the summer recuperating. In the fall of 1913, Paul went up to the LDS College and talked with Brother Frank Seegmiller about getting back in school. The educator looked up Paul's academic record and found it very poor, but his mission record had been good, so Brother Seegmiller gave Paul credit for two full years of high school. Paul was twenty-one years old and to think of attending classes with young high school students did not help his morale. Brother Seegmiller suggested that Dr. Howard Driggs at the Normal School of the University of Utah might help him. Many older students attended there. Dr. Driggs was very kind and became a close friend and adviser to Paul throughout the years.

56 At the university, Paul found that he could keep up with his peer group by working hard and applying himself. His self-confidence began to grow. One of his first experiences to illustrate this came in a botany class. Dr. Twiss told the class to draw a starch grain. Paul had no confidence in his ability to draw because of an experience in one of the lower grades. Mr. Sheets, his teacher, had placed a stuffed duck before the class and told them to draw it. Paul could not make a drawing that looked like a duck and told his teacher this. The teacher kept Paul in during recess and insisted that he draw. Paul sat there until his sister Joy, unbeknown to the teacher, slipped in and drew it for him. From then on, drawing was an impossibility as far as Paul was concerned.

Paul told Dr. Twiss that he could not draw. The professor had Paul look in the microscope and said all you have to do is to make a few marks like this. His drawing looked very much like a grain of starch. Paul asked the professor to show him again and the professor drew it the second time. With this help Paul was able to complete his drawing. By the end of the course, the class had been assigned one hundred and fifty drawings. Paul's were chosen as the best in the class and were sent to the East to compete in a national contest. The drawings placed

fourth in the nation. His perception of himself continued to change. When discussing such feelings, Paul usually used the term "compete," showing that he tended to measure himself against others, rather than against an internal yardstick.

One day in math class, Dr. Pherson put some propositions on the board, then turned to the class and said, "Anyone who can work this first proposition will be excused from the examination." The solution just came to Paul and he said, "I can work that one in my head." Paul outlined the solution for the professor and was excused from taking the exam.

Paul took chemistry every year while at the University of Utah. In the last year, as the students walked into their chemistry examination, Dr. Bonner announced that Paul Richards and Robert Ogilvie would be excused from taking the test. These experiences gave Paul more confidence, and in his own words, his "inferiority complex began to weaken."

Dr. Snoddy taught psychology and was very interested in psychoanalysis, and his teaching proved to be a big help to Paul. One day he asked Paul if he might psychoanalyze the young man. After the analysis, he told Paul that his biggest difficulty was his fear of failure. The doctor lent Paul several books on this subject. He read them and reported back to the doctor. For this he received credit. From a modern psychological point of view, Paul apparently had a strong perfectionist streak that made it difficult to attempt any task in which he would not excel. That he learned to work with this difficulty is a credit to him.

57

Dr. William Stewart, head of the Normal School, wanted to establish a department of agriculture. Through his efforts, the University brought out a young man from the East, Dr. Stiever, who became "very companionable" with Paul. Dr. Stiever also allowed Paul to take courses on the side and get extra credit.

Dr. Joseph Merrill, a professor at the University, lived near Paul's family. He used to walk to and from school, and often Paul joined

him as he went home. From these conversations and answers to Paul's many questions, Paul "gained a very gratifying fund of general information." Sometimes Paul walked home with Dr. Byron Cummings. Paul's visits with him increased his knowledge of history and archeology. Dr. Cummings wanted Paul to join his summer archeology expeditions, but Paul's health would not permit this. Paul also felt that he needed to take courses during the summer to further his studies, and could not take time off for an archaeology dig.

Paul recalled his professors in positive terms: "More than anything else my association with these men helped me to gain confidence in myself." With their encouragement and help, Paul completed his missed high school classes and earned all but six credits for a B.A. degree in three years. He went into Normal School the same year that his classmates went into college and he got out of the University one year ahead of them. As Dr. Brooks had predicted, Paul caught up with his class and he made top grades.

58

A surviving class notebook of Paul's from a 1917 class on Bacteriology at the University of Utah Summer School shows a diligent student who kept impressively precise notes in a well-written hand. Another surviving class notebook, from the fall of 1917 at Harvard Medical School, contains three hundred and twenty pages of notes for classes in Pathology, Surgical Pathology, and Bacteriology. Paul had learned to draw by this time and included drawings of blood vessels, bacteria, and lesions in the notes.

As mentioned before, five of Paul's relatives, including his grandfather and three uncles, had gone into the medical profession. Paul's decision to follow that professional path also reflected the family tradition of public service. Despite the lack of a bachelor's degree, his grades were high enough for him to be accepted to medical schools at Johns Hopkins, Columbia, and Harvard, three of the most prominent medical schools in the country. Paul had seen both Johns Hopkins and Columbia Medical Schools and felt that they were rather run-down.

When Harvard sent him a picture of five new beautiful white marble medical buildings, Paul chose Harvard. He also felt that the atmosphere of New England and the vivid history of Boston and the local area, which he had read about, meant that outside of school, Boston had much to offer. He was not disappointed.

Paul married Ethel Bennion on September 7, 1916, a few days before they left for Boston. He thought of his new wife as "an independent woman," bright and accomplished. Ethel was raised in Taylorsville, and she was a graduate of the University of Utah who had worked as a home economics teacher at Granite High School and LDS High School. Her grandson remembered that "she made all her own furniture . . . made it from wood." A picture of her at the University shows an attractive and well-groomed woman, five years older than Paul, and twenty-nine years old at the time of her marriage. The Bennion family was socially prominent, and family lore describes Ethel as voicing the opinion that her family was more prominent than her husband's. While she may have believed that, such an opinion is hard to support, considering the status of Willard Richards in Latter-day Saint history.

59

Boston

Soon after arriving in Boston, Paul and his new bride met the Robisons. Rulon was at the New England Conservatory of Music, and Claire, his wife, had been a classmate of Ethel's at the University of Utah. After settling in, which took about a week, the newlyweds still had a few days before starting at the medical school and they spent this time with the Robisons in sightseeing.

They went to Marblehead, an old town just a short distance north of Boston. One of the great attractions there was a formation in the rocks called "The Churn." It was a high, jagged v-shaped structure, and as high tide came in, the water spouted up some twenty or thirty feet above the surface, then it fell back and rushed out into the ocean.

This phenomenon was repeated as each wave rolled in. As Paul bent over the rim to look down into this chasm, his wallet containing five hundred dollars in gold and greenbacks dropped out of his pocket and onto a ledge some fifteen or twenty feet below. He could see it lying there. Each time the water came in, his wallet was pushed up and as the water returned, it was deposited on the ledge again. He thought that he could see the wallet in the flow of water as it spouted up and he said to Ethel, "Take hold of my hand and hold on tightly. Maybe I can catch it as it falls back." They did this and he stretched out his hand into the water and retrieved his treasure. As he recalled, "At that time five hundred dollars was a volume of money and it meant a great deal to a poor lad just starting in medical school. This was one of the most exciting moments of my life."

60 The couples visited the north end of Boston and saw Paul Revere's home, the Old North Church, Copp's Hill, the cemetery, and Louisa May Alcott's home. They traversed the route of Paul Revere's famous ride from Boston into Concord. There they became acquainted with the Old Concord Bridge, Walden Pond, and the homes of Thoreau and several other poets and writers. On their return to Boston, they went through Cambridge and walked along the banks of the Charles River, saw the old Longfellow home and the Great Elm under which George Washington took command of the Colonial armies at the beginning of the Revolutionary War.

Paul thought that the sightseeing laid a solid foundation in his mind and helped him "gain an understanding of the patriotic fervor which is a necessary part of every good American." It established in all of them an appreciation for those places and an "absorbing interpretation of the spirit that existed there." This general introduction to Boston was repeated regularly when Paul and Ethel took visiting friends and relatives to the same locations.

The repetition of seeing these places that played such an important part in American history impressed upon Paul the value of being a stalwart

American and a defender of the Founding Fathers principles. It gave him a sense of responsibility. "They established a nation with many liberties for us and it is our duty to see that these principles are maintained. In other words, it is not what democracy does for us but what are we willing to do to keep democracy on the proper plane and level."

Paul and Ethel spent six years with the Robisons in Boston, and seldom a day went by that either Paul or Ethel did not contact them. They became life-long friends. Friday afternoons about five o'clock, all four of them walked from the Back Bay district to old Faneuil Hall, which was the marketing place at that time. There they purchased their supply of vegetables, meats, and groceries for the entire week. To keep within their strict finances, Rulon and Paul put their wives on the streetcar with the groceries. The women returned home for a fare of five cents each, and the men walked back a distance of four-and-one-half miles.

Paul's feelings of insecurity popped up again at Harvard. Early in his first year, he had to prepare a paper in anatomy for Dr. John Warren. It came back with a "C" mark and a little note, "Be glad to see you. Bring your paper." Paul went to his office with fear and trembling, for Dr. Warren was a very aristocratic man. His people were Bostonian plutocrats. He asked Paul to sit down. Looking at Paul very kindly, he asked, "What do you think of the mark I gave you?"

61

Paul answered, "Well, Doctor, you did not dot an "i," cross a "t," or correct a misspelled word, so it is hard to understand." Like his father, Paul was a good penman in those days and his paper was extremely neat.

"Have you ever been bothered with the feeling of a lack of security?" Dr. Warren asked.

Paul told him of his handicap and Dr. Warren talked to him for one-and-a-half hours. As Paul sat there, the professor said, "You

are an impressive young man. You have fine features and a high degree of sincerity. With a mind of conviction you should go a great way in the world." He gave Paul a lot of good fatherly advice, and as Paul left Dr. Warren said, "Well, my boy, let me tell you one more thing. Learn to go through the world holding your head up and feeling that you are as good as any man you meet. You can be better if you will apply yourself."

Paul felt most fortunate to have had such a wonderful home life with Ethel and to have met such a great man, who would pause in this busy world and take an interest in a kid who had no confidence in himself. It also amazed Paul that Dr. Warren could sense his insecurity by reading only one paper that he had prepared. From this interview, Paul took greater courage and determination with him as he advanced through medical school, earning a good record, one of which he was always proud.

62 Early in the spring of 1920, after Preston arranged for Paul to get his A.B. (alternate acronym for a bachelor's degree that relies on Latin, instead of English), Paul transferred six of his surplus first year credits from Harvard to the University of Utah to complete his graduation there. A short time later, on May 20, 1920, Paul's mother and Ethel used the two tickets allotted to Paul to attend the graduation exercises on Harvard campus at Cambridge. Fear of failure had played such a terrible part in his life, but now he had obtained a degree from Harvard, and thus had proved his ability to himself, his wife, and his mother. Paul knew that his mother was very proud of him; he had never seen her face more radiant and filled with such joy as he saw that morning when he passed her in the sidelines during the graduation march. After the exercises were over, Louie spoke many times of the joy she had received from hearing President Eliot's Baccalaureate address. His life had meant much to Louie because of his literary background and his compiling of the great books which she enjoyed throughout her adult life. (The Harvard Classics: "Dr. Eliot's Five-foot Shelf of Books" were

compiled in 1909.) She also expressed satisfaction to Paul for the fact that he was one of thirty students out of a class of one hundred twenty-five who had graduated without a mark of any type against him. This gave Paul even more confidence in himself.

Harvard offered Paul other mentors who helped mold him into the professional that he aspired to be. Very early he came to believe that we are only composites of the individuals we meet. From the qualities we find in others, we tend to pattern our own lives as much as our abilities will permit toward that which we admire most in them. Such men — Dr. Harvey Cushing, the Father of Brain Surgery; Dr. W. P. Graves, an outstanding gynecologist; and Dr. Frank Pemberton, who worked with Dr. Graves; Dr. Newell, professor of obstetrics; and Dr. Lovett, orthopedist at the Children's Hospital — were all great men in their fields. Paul admired them and remained grateful for their encouragement. In later years, his admiration for them only increased as he reflected on his life, because he realized how profound their contributions had been to his education and his life.

63

As Paul looked back on Ethel and his life at Harvard, he remembered lots of hard work and satisfaction. Their first daughter, Lenore, was born there on December 11, 1917, and she proved to be a great joy in his life. He also thought of the lifelong friends that Ethel and he made. Among these friends, all very dear to the couple, were Rulon and Claire Robison; Aunt Edna Wells Sloane and her son, Lawrence; Mr. and Mrs. Val Hoyt; Dr. Cyril Callister and his wife, Vera; Dr. Howard Anderson; Dr. Fred Wilcox; the Bootles; the Marshalls; and Mr. and Mrs. E. E. Bourne. Included in this list was Dr. Louis Viko, who later became a professional colleague in Salt Lake City.

Hospital Experience

Paul completed medical school in three years. His fourth year, 1919-1920, and the summer of 1920, he spent in surgery at

the Peter Bent Brigham Hospital (located directly adjacent to the Harvard Medical School). Moving to Cincinnati, Ohio, he spent a year (1920-1921) at Cincinnati General, then returned to Boston to spend six months at the Boston Lying-In Hospital and six months at the Free Hospital for Women in Brookline. He graduated from all of these hospital residencies or internships. Dr. Paul concentrated on becoming a general practitioner with an emphasis on obstetrics and gynecology. Compared to the extensive specialization that characterizes American medicine today, Dr. Paul received a broad medical education.

As an intern, Paul always had his patient fully prepared for the staff doctor when he arrived, no matter what time of day or night he came. All preliminary tests were completed and all necessary information tabulated. Many of the doctors commented on what a help this procedure was to them, and the habit thus formed was invaluable to Paul.

64 His mother had played a very important part in his life. That fact, along with the love, care and cooperation of his sisters, had made of him a self-described "woman worshiper." To him, women were wonderful. In Boston, two more women were added to his list of those who influenced him — Miss Louise Zutter, superintendent of the Boston Lying-In Hospital and Miss Ewing (called Ma Ewing), superintendent of the Free Hospital for Women in Brookline.

Both of these women took Dr. Paul into their confidence and assigned him a great many responsibilities not common to a house officer, which gave him insights into the administrative side of hospital work. He was given access to all the records of the meetings of the Board of Trustees where the policies of the institution were formed. All the financial records dealing with cost, purchasing, personnel and details in everyday procedures were also available to him.

Miss Ewing was one of the most efficient hospital operators Dr. Paul ever knew. He met her each morning at five minutes to four and they

surveyed the hospital from every aspect. The two made a thorough inspection of the laboratories, nurses' dwellings, kitchen, dining rooms and stock rooms, and they visited every patient in the wards. (The hospital had a capacity of two hundred beds.) In good weather they made an inspection of the grounds. This was all accomplished in one-and-a-half hours. They reported for breakfast at five-thirty, and surgery began each morning at six. Miss Zutter earlier gave him a similar experience, though she was not so thorough.

While at the Free Hospital for Women, Dr. Paul was given the responsibility of working out the technique of radium treatment for cancer of the cervix and uterus. Dr. Graves, the gynecologist of that institution, sent Dr. Paul to New York and Philadelphia for a week to observe the methods being used there.

On Dr. Paul's return, Dr. Graves asked him, "Do you know how to use it?"

Dr. Paul's answer was, "I do not know how to use it, but I sure learned how not to use it."

65

Dr. Paul had seen many perforations of the bladder and rectum from the use of radium. They ranged from the size of a pea to the size of a ping pong ball. This was proof to him that the radium was not under control and that the rectum and bladder were not sufficiently packed away and protected from the source of radiation. His job was to determine how to keep the radium absolutely in place and to get the rays on the parts where they were needed. He conceived of the idea of using a round non-irritating disc, on the surface of which could be placed four capsules of radium. It occurred to him to use a silver dollar. He kept one in his pocket, which he had carried since 1913, calling it his good-luck piece. On his twenty-first birthday, in the chemistry laboratory at the University of Utah, he had covered this dollar with paraffin, written November 25, 1913 through the paraffin, and treated it with nitric acid, thus etching the date on his good luck dollar.

Paul took his silver dollar to the machine shop, marked the center, and drilled a hole that admitted a size twenty French catheter. Two long capsules of radium were placed in the tip of the catheter and slipped through the hole in the dollar so as to protrude two inches. On one side of the dollar were clipped four capsules of radium forming a square with the catheter in the center. The dollar, with tiny holes drilled around the edge, was then sewed to the cervix, with the catheter extending up into the uterus and the radium capsules on the cervix. This placed the radiation where it was needed and he never got a hole in either bladder or rectum. The instruments used later were based on this principle. Dr. Graves said, "It would take a man from the West to think of that because no one else would have a silver dollar." Dr. Paul did a great deal of experimenting with radium, sometimes working four and five hours a day and he always used a live capsule. It did not occur to him to use a dummy capsule to protect himself from radiation.

66 While the medical profession enjoyed the benefits from making x-rays of the human body and treating different forms of cancer with radium, there was not yet sufficient appreciation of the dangers of either x-rays or radium. At this time, all X-ray tubes were glass tubes and were not shielded, thus exposing the operator to a great deal of radiation. Only later, in 1924, was the first minimal daily exposure limit to x-rays proposed. Dr. Paul was as careless as his contemporaries. Even the fact that the hospital's radiologist had already lost a number of fingers to radium exposure did not sufficiently alarm the young doctor.

Dr. Brown, the radiologist, had a laboratory in his office at the hospital, and Dr. Paul spent a great deal of time working with him. Dr. Brown's work was confined to fluoroscopy of the heart, lungs, and the gastrointestinal tract. Despite the lost fingers, the radiologist felt that the improved machines had eliminated the danger. That assumption proved to be false. While an intern, Dr. Paul "burned" his hands with radiation. His eldest daughter cannot remember him without "funny-looking fingernails and heavy crusted areas on his

hands.” Dr. Paul “was always whittling on his hands or fingernails” with a “beautiful, sterling silver pocket knife that he kept at the other end of his watch fob.”

While in Boston, Dr. Paul experienced two severe epidemics. Infantile paralysis was considered a disease of childhood, but when an epidemic struck Boston in 1917, many adults were stricken, some as old as seventy years of age. It was at this time that the disease lost the name of infantile paralysis and took on the name of anterior poliomyelitis.

Then came the Influenza Pandemic of 1918, a terrible disease that swept the world in the wake of the First World War. This epidemic still haunts the world medical community. Whenever a new medical threat appears, whether it be Ebola, SARS, or the H1N1 flu of 2009, doctors and commentators always refer back to the 1918-1919 influenza outbreak that killed more people than the First World War, a number variously estimated to be between 20 and 50 million people worldwide. While often called the Spanish flu, the outbreak apparently started at an army camp in the United States, then spread to Europe and on to other countries around the world, carried by soldiers returning to their homes from the fighting on the Western Front in France and Belgium. About 675,000 people died in the United States alone.

67

This was the first time in his life that Dr. Paul met death in large proportions. He frequently pronounced eight or ten people dead in a single day. These deaths frustrated him because they represented his greatest fear—the fear of failure. Dr. Paul could always recall very vividly that the first twenty or thirty deaths, which occurred within a short time, threw him into such a state of depression that he was forced to develop some type of philosophy to bring him out of that submerged condition. He believed that arriving at this philosophy was one of the most significant accomplishments of his life. At that time he realized that the only way to face life is to do the best one can in any situation and then accept the results. This philosophy helped him through many serious problems.

Home Again

During Dr. Paul's residency at the Boston Lying-In Hospital, Ethel and he purchased an old one-seated Model-T Ford to help him in his district work. This work consisted of visiting and checking on the obstetrical patients who had been delivered by students of the Harvard Medical School. Since each student was required to deliver at least ten babies before he could receive his diploma, this responsibility was very important. Because Dr. Paul took a special interest in obstetrics, at the conclusion of his medical education he had delivered more babies than any doctor who graduated from Harvard. As he recalled, the number was ninety-two.

68 The old Ford served the couple well, but by the summer of 1922 it needed overhauling. Rule (Rulon) Robison also owned a Model-T and the two men decided to fix their own cars. For two weeks they worked from daybreak until after dark. Finally the cars were in good condition and the two men had had a lot of fun and gained some valuable experience. Dr. Paul believed this was one of the most pleasant experiences that he ever had with Rule. Practically every time the couple met the Robisons after that, the experience of the open-air garage remained a source of amusement as they reflected on the odd contrivances they used to overhaul their Model-T's.

In September 1922, after the completion of his medical education and graduation from various hospitals, Dr. Paul, Ethel, and Lenore packed all their personal belongings into this same little Ford and started out on their trip back to Salt Lake City. They wanted to visit some historic Latter-day Saint locations and other points of interest before heading west. They went up to South Royalton, Vermont, and saw the birthplace of Joseph Smith. They then turned south over the Mohawk Trail and drove through the northern Adirondacks.

At Saranac Lake they met the Robisons in their remodeled Ford and toured part of the country with them. The Robisons returned

to Boston, and Dr. Paul and his family turned westward, up the St. Lawrence, through the Thousand Island district and into Niagara, then down to Palmyra.

They visited the old Smith farm, where Joseph Smith received his first angelic visitation, and the Hill Cumorah, where he obtained the golden plates containing the Book of Mormon. From there they went to Nauvoo and saw the old homes of Paul's grandfather (Dr. Willard Richards), Brigham Young, John Taylor, Joseph Smith, Heber C. Kimball, and many other church authorities. They also visited the old farms of John and Samuel Bennion and after hunting around, they located the old Nauvoo cemetery and saw the grave of Jennetta Richards, his grandfather's first wife. They found the headstones to be quite elaborate. Some were very beautiful.

That night they stayed at a little old hotel and became acquainted with the innkeeper. His father had ransacked the Latter-day Saint homes and boxed up many of the things left behind by the Latter-day Saint people when they migrated westward. Dr. Paul and Ethel had the opportunity of going over some of these old relics and they found the lock from the front door of Grandpa Richards' home. It could have been purchased for twenty-five dollars but the couple did not have the money.

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They crossed the Mississippi at Keokuk, turned northward and followed the old Mormon Trail to Winter Quarters, now called Florence, Iowa. It was here that Dr. Paul's father was born on January 25, 1847. They located a man who had lived there all his life. He knew the town and its history very well and took them to the old cemetery, which they never could have found by themselves because it was so overgrown with foliage of sumac shrubs. Lenore, five years old, insisted that she explore with her father. He took her on his back and spent forty-five minutes wandering through the dense brush. They located many headstones. These stones were quite simple and a great contrast to the ones at Nauvoo. When the family got back to the car, their clothes were torn and their arms and legs were bleeding.

They also visited the site where the three trees — Faith, Hope and Charity — were planted. Charity was the only one still standing. From there they followed the Mormon Trail westward. When they entered the Red Desert, a high altitude arid region along the eastern slope of the Continental Divide in Sweetwater County, Wyoming, the rear axle of their car broke. Dr. Paul walked into Granger, a small town twelve miles away, and got a mechanic. They took out the rear end of the car and the mechanic took the axle and Ethel and Lenore into town. Dr. Paul stayed with the car until the mechanic returned. That period of three days and three nights spent in the desert alone was the most lonesome time Dr. Paul had ever known. He was impressed with the inquisitiveness of the coyotes. The place seemed to be alive with them at night. Their howls were so mournful and they came so close that he could see the glitter of their eyes. The day was spent gathering sagebrush so he could have a fire burning at night to keep warm. The cold felt even sharper after the heat of the day. A few cars passed Dr. Paul, but none stopped and he spoke to no one for three days. He drank water from the radiator to quench his thirst. About 5 p.m. on the third day, the mechanic returned with a new rear axle. They put it on and returned to Granger before dark.

Ethel and Lenore had gone to a little, cheap hotel and had phoned home for money. When the money arrived, they paid their bills at the garage and hotel and went out to the public campground, which was in a cow pasture beside a little stream. Several other families were there camping. They cooked their meal, prepared their beds, and settled down for the night. It was very chilly.

About daybreak, two or three big old steers came wandering into camp. One of them practically licked Dr. Paul's face. He felt the breath, which caused him to sit up with a start, and exclaim, "Shoo." That started a stampede. Three steers turned and ran down the pasture at full speed. One went right through the tent of a neighboring tourist and carried the tent along with him. The woman in the tent screamed, which made them run faster than ever. The parents were on one side of the tent and the two children on the other side, but

the animal ran between the beds, so no one was hurt. Ethel and Dr. Paul laughed and laughed. It was one of the best laughs he ever had. To see that little tent, about six by eight feet, wrapped around a big steer that weighed a ton was really a funny sight. It scarcely made a good jacket for him. The other campers and the Richards were somewhat depressed, however, when they recovered the tent, because it was ripped to pieces.

The family arrived in Salt Lake City on October 6, 1922. A few minutes after their arrival, Dr. Paul's mother said, "Dr. Tyree wants you to phone him." When Dr. Paul gave him a call, Dr. Tyree said, "Paul, Dr. Straup is here in the hospital and is very ill, and he is worrying about his practice and hospital in Bingham. Would you go out and take over for him for a few months? I can't pull him out of this unless he gets his mind at rest."

The next morning, Dr. Paul went to the hospital to see Dr. Straup and agreed to go to Bingham and look after his affairs for six months at two hundred dollars a month. Dr. Straup gave Dr. Paul a little advance on his wages, and after Dr. Paul arranged for Ethel and Lenore to stay with Aunt Lizzie Panter, Dr. Paul's father drove the new doctor out to Bingham on October 7, 1922.



Chapter II

DR. PAUL AT BINGHAM

Mining at Bingham

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When the Latter-day Saints first came to Utah in 1847, they were looking for a refuge from persecution and a place to build a religious utopia. Brigham Young wanted a place where the Saints could sustain themselves through agriculture and be as self-sufficient as possible. Colonies of Saints were sent out in the following years to other locations to collect salt, plant cotton, mine iron, lead, and coal, or to develop other industries that the Saints needed. While he was eager for the Saints to be self-sufficient, Young did not want to find a lot of mineral wealth. He had seen what had happened to California when the discovery of gold brought everyone running, seeking only riches and not building a community of righteous worshipers.

Tensions between the Latter-day Saints and the rest of the country culminated in the 1857-58 Utah War, which ended with an agreement by the Saints to submit to federal authority. During the Civil War, the federal government sent the Third California Volunteers to Utah to guard the overland mail service, guard overland commerce, and make

sure that the Latter-day Saints did not get into any mischief. Patrick Edward Connor, the commander of the regiment, despised his new Mormon neighbors. Connor recognized that discovery of mineral riches would bring many non-Mormons to the territory, and since many of his soldiers had experience as prospectors, he sent them out to find the riches.

The soldiers found ores containing gold and silver in Bingham Canyon, though who first discovered the ores is a matter of historical dispute. The canyon was named after two brothers who used the deep canyon on the eastern slope of the Oquirrh Mountains for grazing cattle and cutting lumber. The brothers had also found valuable ores, but Brigham Young advised them to stick to their previous pursuits. After the rediscovery of the potential of the rocks, Connor helped create the West Mountain Mining District, which included most of the Oquirrh Mountains. After the war, Connor remained in Utah, developing mining properties in both Utah and Nevada. For the discoveries of his prospector-soldiers, he became known as the "Father of Utah Mining."

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Contemporary geology has shown us that the ores at Bingham were formed when a mixture of molten rock and geothermal water was forced toward the surface 30 to 40 million years ago. The water and heat created a precipitating process, concentrating ores into veins. The same process created the ore bodies in the Wasatch Mountains across the Salt Lake Valley from Bingham. Those ore bodies led to the rich mining strikes in Park City and Alta, Utah. There is speculation that these two groups of ore bodies are part of the same formation, and that much more ore exists far below the sediment deposits of the Salt Lake Valley, connecting the two centers of mining. It could also be that the Wasatch fault divided the formation and that the ore bodies are no longer connected.

The limitations of wagon transport made large-scale operations in Bingham impractical until the Utah Central Railroad was built in

1873. Mining activity rapidly expanded as gold, silver, and lead were extracted. Copper was also found in low grade quantities, but when a richer vein was struck in the 1890s at Highland Boy, a smelter for copper was set up. The train brought the excavated ore from Bingham Canyon into the Salt Lake Valley, and by 1904 there were three large copper smelters in Murray and Midvale. Murray also had a large lead smelter. Local farmers filed lawsuits against the smelters, claiming that sulfur dioxide gases were damaging their crops. The farmers won. The smelters temporarily closed, paid large damages to the farmers, and then reopened with new technology that limited the more serious toxic gases.

74 Daniel Cowan Jackling, a mining engineer and metallurgist who had grown up as an orphan in Missouri, arrived. Jackling and his partners gathered together some claims and founded the Utah Copper Company in 1903. The copper-bearing ores on their claims were not rich veins, since they usually assayed at less than two percent. A ton of ore, when processed, would only yield 39 pounds of copper. Inspired by the use of steam shovels in the iron mines of Minnesota, Jackling introduced steam shovels at his operation in 1906. This was industrial mining that required heavy equipment and heavy capital outlays. Blasting broke up the rock, and steam shovels loaded the rock into trains, which then carried the rock to the smelters. Not all the rock held copper, so layers of overburden had to be removed at times and carried away to be dumped as waste. The Guggenheim family invested capital and other assets in Utah Copper, while further consolidation in 1910 merged the two copper mines at Highland Boy with Utah Copper.

Utah Copper Company was acquired in stages by the Kennecott Copper Corporation from 1916 to 1923. Utah Copper gradually became the largest operation in the canyon, as they excavated the area known as "copper hill." Later it was just called "the hill" or "the richest hole on Earth." Jackling ran the operation for another three decades and became known as the "Father of Porphyry Mining."

Porphyry is igneous rock characterized by large-grained crystals. A larger-than-life copper statue of Jackling stands in the rotunda of the Utah state capital building, marking his contribution to the economic growth of the state.

The Town of Bingham

From the very beginning, immigrants from numerous countries flooded the mining camps of Bingham Canyon, adding ethnic and religious diversity to the territory. Immigrants tended to cluster together into separate camps that became communities. Scandinavians found a home at Carr Fork, while Slavs and Italians clustered at Highland Boy. Other communities had names such as Jap Camp, Greek Camp, Dinkeyville, and Frog Town. Britons and Austrians settled in Lark just outside the mouth of the Canyon. A 1912 survey by the Utah Bureau of Immigration, Labor, and Statistics found among the residents of Bingham Canyon: 1,210 Greeks, 402 Northern Italians, 237 Southern Italians, 564 Austrians, 254 Japanese, 217 Finns, 161 English, 60 Bulgarians, 59 Swedes, 52 Irish, and 23 Germans.

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Because of the steep walls of the canyon, a single main street ran up the canyon, forking as it went up side canyons. The narrow confines led to the common joke that the local dogs could only wag their tails up and down. Stores and homes lined the unpaved street. The buildings were a mismatch of confusion, reflecting the wildcat ways of mining camps, but as generations passed, the Canyon became more orderly, a place for families to be raised as the men worked in the ever-expanding operations of Utah Copper and other mining companies. In 1900, some 3,000 people lived in Bingham Canyon. By the 1920s, when Dr. Paul arrived, more than 15,000 people lived in the various communities of Bingham Canyon. The main street of Bingham was not paved until 1928, six years after Dr. Paul arrived.

Dr. Straup owned the Bingham Canyon hospital and was looking for a temporary doctor when he contacted the young Dr. Paul. Straup was a short, stocky man who chewed tobacco and smoked cigars simultaneously. As Paul's daughter later described it, her father went out to Bingham to work for a month, locum tenens (a medical term for a temporary position), and left twenty-six years later.

Dr. Paul Arrives in Bingham

76 Bingham was a real challenge for Dr. Paul. He had been there once as a small boy, and he noted that its appearance remained practically the same. The old cable tramway ran through the town, and parts of the old boardwalks were still in use. This mining community certainly had a primitive appearance. Just before leaving Boston, Dr. Paul had read an article on Bingham in *The American Mercury* magazine and the description proved vivid and true: Bingham was a one-street town thirteen miles long and two saloons high. Little did Dr. Paul realize while reading this description that within a few weeks he would set up his practice there.

Immediately upon arrival, Dr. Paul went to the hospital, located his room, which was to be his home for over a year, and placed his few belongings in order. Then he surveyed the building, which had a capacity of twelve or fourteen beds, and got his general bearings. There were five employees: an office clerk, a janitor who also worked as the cook, and three nurses. It was a meagerly organized and poorly equipped institution. To Dr. Paul it seemed like a place for first-aid work only. On inspection, he found it very substandard in cleanliness. He spent the first afternoon in the office and was impressed with the many nationalities that came in. Among them were Greeks, Austrians, Italians, Japanese, Finns, and Mexicans. He had never seen such a variety, even in an outpatient department in the cosmopolitan center of Boston. What distressed him most was the lack of respect and regard the miners had for women and the very disrespectful way in which they addressed the female clerk in the office.

Dr. Paul's first night in Bingham was a restless one, as he heard the blasting in the mines, and especially in the Utah Copper pit, going on all night long. It seemed to him that this must be characteristic of the battlefield where the shooting goes on in a periodic or rhythmic fashion.

On October 8, he arose at daybreak, and continued his close inspection of the hospital. His attention became focused on a small, little-used room designated as the operating room. Very few operations had been performed in Bingham Hospital; the surgical cases had been sent to the County Hospital. The room was dirty and an unfit place for surgery; it had to be scrubbed. Dr. Paul had two dollars and fifty cents in his pocket, so he went down to J. C. Penney's and bought a pair of coveralls for a dollar and seventy-five cents, and a couple of bars of soap and a scrub brush. Returning to the hospital, he donned his working clothes, picked up a bucket from somewhere, and spent the entire morning scrubbing and cleaning the operating room. The walls had been well painted and when they were thoroughly cleaned, the room looked very respectable. How fortunate that the place was sanitary, for in less than forty-eight hours a ruptured appendectomy-pregnancy case came in and an operation was necessary. Dr. Paul felt gratified that the room was clean because that type of case could very easily become infected. Fortunately for him, the woman got along very well, with no signs of infection.

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Dr. Paul felt handicapped in his work because the hospital was so poorly equipped. There was no blood pressure machine in town, no microscope, and no pressure sterilizer. There was only an old Arnold autoclave, which had been in use for many years and used an older process called fractional sterilization. The materials to be made sterile were put in and steamed for two or two and one-half hours, and then left several days for germination to take place from the bacteria not killed. The process was then repeated and there was another delay of twenty-four hours before the process of sterilization was repeated yet again and the tools were supposed to

be sterile. Dr. Paul had never seen this process before and felt that it was most unsatisfactory for the type of work with which he would be confronted. He purchased a little pressure cooker for eighteen dollars which had been made for putting up fruit. This was the first means of pressure sterilization ever used in Bingham. It was most fortunate that he had the foresight to get this little sterilizer, for soon the hospital had many fracture cases where the closing of compound wounds was necessary. He used it for eight years and it served him well in performing many operations of the most technical type.

The next morning Dr. Paul set out to acquaint himself with the various mine superintendents with whom Dr. Straup had medical contracts. There was the Utah Consolidated, commonly called The Highland Boy; the Utah Metals, farther up Carr Fork in the Highland Boy District; and the U. S. Mine up the main canyon. He visited all three mines early in the morning of October 9. Then he went to Lark and visited the mine there, another property he was responsible for.

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That day he also laid out his plans for his normal daily schedule. Surgery was to be at 6 AM, followed by the care of the hospital patients; then he would hold morning office hours for his examinations; after that, he would make calls on those being cared for in their homes. Directly after lunch he had afternoon office hours, then further care of hospital patients, and more after-dinner office hours, followed by evening house calls which had accumulated during the day. This essentially became the routine he maintained throughout the twenty-six years he spent in Bingham. It was a very strenuous program, but it was necessary since the mines worked twenty-four hours a day. They had three shifts — day shift, afternoon shift, and graveyard shift — and the men went to and from work almost continuously.

During those early days of routine, Dr. Paul became thoroughly acquainted with every department of the hospital, from the heating

units in the basement to the kitchen, store rooms, clinic offices, staff, and the hospital itself. He knew every detail.

Dr. Paul was alone in Bingham, having left his family in Salt Lake City, and the routine established required a great many hours of work, soon building to from sixteen to twenty hours a day, seven days a week. Only two holidays were observed in the entire town: Christmas and the Fourth of July.

After having thoroughly cleaned the operating room, Dr. Paul proceeded to scrub the dressing rooms and the two waiting rooms, one for men and one for women. These rooms constituted the clinic. He did this work in his spare time and sometimes he scrubbed all night and did not go to bed for periods of twenty-four to thirty-six hours. Soon Dr. Paul and his staff had the institution cleaned up, and they gained a reputation for cleanliness and for good results in surgery. The scrubbing, in conjunction with the little pressure sterilizer, soon paid off in the end results that they obtained with their patients. Faith and confidence grew rapidly, so that the organization was soon working to over-capacity. They were required to get more beds and more help. Within six months, he had to have another physician come work with him.

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Hospital work grew rapidly and home visits grew to great proportions, creating a real problem in transportation. As soon as winter set in, the doctors were unable to use their automobiles. Horse-drawn bobsleds were used to transport the ore down the canyon, but since they had a different track gauge from the automobiles, it was impossible for the automobiles to ride the ruts up and down the steep roads; so the doctors had to resort to horseback. This was not a bad method of transportation, but it was slow. The old brown horse that Dr. Paul used for several years was a very reliable creature. He seemed to sense where Dr. Paul wanted to go and as he had only one rate of speed, Dr. Paul would put him in motion and away they would go. All Dr. Paul had to do was to hang on, and he had many a good nap as they traveled up and down the canyon road.

The winters in Bingham were very severe, and it was quite an experience to face the blizzards on horseback. Night calls at the mine were common, and often an injured man would have to be transported to the hospital by bobsled. As winter progressed, the snow became deeper and deeper so that penetration into outlying districts became impossible, even on horseback. After riding as far as he could on his horse, Dr. Paul put on skis or snowshoes to finish his journey. There were many outlying prospects in the canyon, some were three to six miles away from the central areas, which made travel very tedious and laborious. At times Dr. Paul became terrifically fatigued and sometimes he would stay all night at these distant homes to get a little rest. It was quite a joy to be away from a telephone.

80 The home care practice gradually became excessive. All obstetrical cases were delivered in the homes and many illnesses were cared for there. In fact the hospital had never won sufficient confidence in the minds of the people for them to send any patients there except those people too sick to be cared for at home. For centuries, hospitals had mainly been used by the poorest and the sickest, and infections often spread before doctors understood the germ theory of disease and realized that hospitals were fertile breeding grounds. After the germ theory was introduced, hospitals had been improving their care for several generations. Dr. Paul understood this and made Bingham Hospital into a clean environment ready to attract patients to him, to lessen the need for him to go to the patients.

Dr. Paul soon saw a definite growth of confidence in the hospital by the miners and their families. The people of Bingham exhibited faith in him, and Dr. Paul found their warmth and consideration was often quite touching. Their thoughtfulness for him made his work as light as possible. They developed such a degree of reliance on him that he began to feel that he had become a necessary individual in the community where he had only promised to stay for six months.

This mutual reciprocity of endearing feeling between Dr. Paul and his patients was maintained throughout all the years that Dr. Paul spent in Bingham. Dr. Paul had been fortunate in developing an ever-deepening philosophy regarding his work, which inspired in him the belief that it could bring about the greatest human relationships that a man can possibly enjoy. Practicing medicine created a closeness with people that one could attain in no other way. His patients not only brought their physical problems to him, but they brought all their problems. He soon became the father confessor to people of all faiths and all nationalities, and he felt honored to be awarded their complete confidence. Dr. Paul felt duty-bound to serve them in every way humanly possible.

On January 7 of that first year, Dr. Paul was invited to visit many Austrian homes, where their Orthodox Christmas was being celebrated. He thought that this was one of the most interesting things that ever came into his life. It was an entirely new and different concept of Christmas — something he had never known before, where the spirit of Christmas was expressed in the emotional giving of one's self openly and wholeheartedly to any and all who came to the door. The Austrian homes were open twenty-four hours a day for three consecutive days and all who came by were invited in and fed. The meal was a banquet such as Dr. Paul had never experienced in a home previously. Everyone was winced and dined most royally in an impressive shared feeling of friendship and genial association. Dr. Paul comprehended for the first time in his life that the giving of one's self to his friends and to all those who were attracted to his home was the true spirit of Christmas. There was nothing in the home that passed from one person to another that was not produced with their own hands. The people raised their own sheep and pigs and these were dressed and barbecued the day before the Christmas celebration. The entire banquet was prepared from things that the family had made in their own home. The custom of giving to others with no feeling of "a purchase presence" moved Dr. Paul deeply. The Austrian's gifts were all homemade. The planning and the work, the

self-expression and real feeling that went into them were remarkable and unique.

Dr. Paul and Ethel's second daughter was born in Salt Lake City on September 16, 1923, and the couple named her after the mother. A few weeks later Dr. Paul's wife and two daughters moved to Bingham. They lived in a one room apartment over Well's store. A year later they rented a seven room house across the street from the hospital and that was their home for twenty-six years, until they left Bingham in the fall of 1948. Their son Paul, Jr., was born in Bingham on May 24, 1925. Ethel's granddaughter remembers that "my grandmother was mortified that they would move to a place like Bingham." Ethel was a proud woman who enjoyed the status of being a doctor's wife and had expected a more urban setting for her life. "On the other hand, she bawled her eyes out when they had to leave Bingham too. She had grown to love it up there, so she cried when they went and she cried when they left."

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As the children grew up, Dr. Paul took them with him to the Austrian homes and introduced them into what he felt was the true spirit of Christmas. Dr. Paul never let a year pass if he was in Utah without going to visit his Austrian friends in the Highland Boy District and celebrating Christmas with them. Each year was a joyous occasion for him. The family received a note from an Austrian girl after Dr. Paul's death that said in part:

"I surely felt bad about Dr. Richards' death. He was always so close to our family. For the last thirty-two years he has always come to our house on the seventh day of January. He continued to come to my sister's home even after my father died. He was like a father to me."

The most productive period of Dr. Paul's life had begun. His daily routine began with rising at 4:30 a.m. or 5:00 a.m. to start the day early. He returned to his home for meals, since it was such a short walk across the street. Lenore remembered that dinner was "always

prompt at 5 o'clock every night and then he would rest for a little bit and then go back to work." Dr. Paul usually did not return from work until 9:00 p.m. Even then, he could be called out for a late night medical emergency. The youth who had struggled with health issues was now a man of determined energy that left others around him exhausted while trying to keep up. He took the time to take a small nap during the middle of the day, usually in one of the clinic rooms, which helped him maintain his energy. Sundays were reserved for visiting family back in Salt Lake City or Taylorsville, and while Dr. Paul did take vacations, they were often in the form of trips to medical conferences or to consult with physicians on new ways to treat medical problems or perform surgeries.

Tall Tales

Dr. Paul was well-known for his tall tales, love of a good joke, and loud laughter. In his "Memoirs" he included a story about his first day in Bingham, where many of his male patients were antagonistic and even challenged him. Before the day was over, he had engaged in three free-for-all brawls and had knocked three men down. By the time the third man came along, he was "getting in pretty good form." That first evening, after he was through at the hospital, he strolled uptown with one of the men from the mine, Boyd Bernard, and went through the various joints, and he heard several men make remarks about him. One said, "There goes the new doc. He's a pretty tough s.o.b. Better be careful what you say to him or he'll tie into you." That day was the only time he ever had a fight in Bingham. They considered him rather a tough hombre and a regular fellow from then on and he got along very well.

His daughter Lenore only read the "Memoirs" once, and in an interview that she gave in 2000, at the age of eighty-two, she was quite acerbic in her opinion of the "Memoirs." Her strongest

impression was that her father was a dying man and that “a lot of his infirmities (were) showing through in the way of dreaming and fantasizing.” With regards to the story about fighting patients on his first day in Bingham, Lenore had a strong opinion. “My father was not a fighter,” she said; he “didn’t come across with two fists.” He had a strong personality: “if you wanted to talk him out of something, don’t even try it, but he wasn’t an aggressive man in the way of showing or demonstrating his power when he was at work.”

Dr. Paul was a man of slight build and nothing in his known background indicated either the inclination or the ability to fight. These brawls could have been just an act of misremembering. A more likely interpretation is to remember that Dr. Paul was a man who valued humor and tall tales, and this was his version of a tall tale that he had not expected anyone who knew him to believe.

84 **Bingham Canyon Hospital and Clinic**

When Dr. Paul started at Bingham Canyon Hospital, the little institution was heavily in debt and very inadequate for taking care of people who were really sick. Dr. Paul stayed with Doctor Straup until Straup was completely out of debt, and when that was accomplished, Dr. Paul leased the hospital from Straup and started to expand its size and operations. Dr. Paul leased instead of buying because he thought that owning any property in Bingham was a “bad investment.”

Straup maintained an apartment at the hospital for a time, since his wife lived in Salt Lake City. Oddly enough, Straup later returned to the hospital as a “house officer,” where, according to Dr. Paul, he “did all the histories and the physicals and made all the progress notes and assisted in surgery and did anesthesia.” Lenore recalled that Dr. Straup “gave one of the most beautiful open dropped anesthesia’s that you ever saw in your life, and that was when even ether was out

of style, but God, he could give it and the kids never put up a fight or anybody ever put up a fight over it. They just went to sleep so beautifully, ten times better than they could do after they got all the fancy machines." Straup was effectively an employee of Dr. Paul's, though Dr. Paul paid Straup rent for the building.

The hospital gradually grew into a clinic of seventeen examining rooms, two waiting rooms, dressing rooms, a complete laboratory, a diagnostic X-ray department, a modern operating room, and a fifty-bed hospital with kitchen, dining room, laundry, and all the modern conveniences. A name change to "Bingham Canyon Hospital and Clinic" more accurately reflected its dual role, and the institution operated under that name for about twenty years. They had a comfortable capacity for seeing from 200 to 275 patients a day and the little hospital had an accreditation from the American College of Surgeons.

During this development, Dr. Paul added a fourth story, which served 85 as the home of the attendants. The hospital received recognition in "Ripley's Believe It or Not," a newspaper graphic column that described the odd and unusual; it described the hospital as a building four stories high with every floor having a ground exit and a garden that hung on the side of a mountain.

The hospital and clinic eventually had sixty-seven employees and five doctors. Through the years, many doctors came and went and some became very successful in their fields. Those doctors told Dr. Paul on various occasions how much they gleaned from their experience at the Bingham Canyon Hospital. At times students from the University of Utah Medical School also came to the hospital for training.

Dr. Paul recognized that his employees made the hospital what it was. He did not do it alone. Dr. Paul thought that the employees in the hospital and clinic were an outstanding group and they were both congenial and helpful to each other. Some stayed with Dr. Paul for

many years and were always most cooperative. He recalled that Miss Selma Pierson, his surgical nurse, was with him for sixteen or seventeen years and a more devoted person he had never known. She was there during the trying times of the early organization, the years of poverty, so to speak, and later during the Depression years when the economy was tough. Dr. Paul said he had never seen a harder worker in all his life. Lucile Urich, who later became Mrs. John Hutchins, was the same type of person. The functioning of the hospital was sustained by cooperative and dedicated people of that caliber.

Dr. Paul also recalled with special consideration the work that John Hutchins had done for him in the mechanical, electrical, and general electronic fields. Besides his work at Bingham, he also proved most ingenious in helping work out in detail the problems with developing the later Memorial Medical Center. No problem was too tough for him to handle. John always said, "Between the two of us, we can wade through anything."

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Elmo Nelson was one of the most faithful employees Dr. Paul ever knew. He came to Dr. Paul as a certified accountant and remained with him for twenty-three years, until the end of Dr. Paul's life. All of the business and accounting responsibilities of both the Bingham Hospital and Memorial Medical Center were in his care. When the time came that Dr. Paul had to leave Bingham, Elmo worked faithfully on his old accounts and collected eighty percent of his outstanding bills. This was essentially Dr. Paul's entire savings and was the money which he later used to help build the new group-practice Memorial Medical Center. Elmo was an individual who got along with everybody, and Dr. Paul never heard anyone say an ill thing about him. He had more patience than any other man Dr. Paul had ever known.

An indication of costs for hospital services comes from a bill for the delivery of the son of one of Dr. Paul's nephews, C. David Richards, in 1942. The rental of a hospital room was six dollars a day, while

use of the delivery room cost five dollars. A blood transfusion and circumcision each cost five dollars. Intravenous glucose cost two dollars for each 1,000 cc (cubic centimeters or milliliters). The mother spent seventeen days in the hospital full-time, as well as another seven days part-time at the hospital. She also required a blood transfusion eleven days after the baby was born, indicating complications with a difficult delivery. The total cost for everything came to \$155.80, though it is possible that these fees were reduced for a family member and did not accurately reflect normal rates. \$155.80 in 1942 was equivalent to \$2,050.61 in 2009 dollars, still quite a deal.

Schools

The schools of Bingham Canyon soon became of some concern to Dr. Paul. He visited the Highland Boy School a month or two after his arrival in Bingham and was taken from room to room by the principal. On entering one room, Dr. Paul asked, "How many different nationalities do you have in this room?" The principal answered, "I don't know how many we have in this room, but at the moment we have twenty-two different nations represented in the school of three hundred pupils." Dr. Paul remembered that remark very vividly as he became even more involved in local schools, both as a medical doctor and a school board member.

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Bingham had three main schools: one in the Highland Boy District, one in Bingham proper, and one in Copperfield Lark, about nine miles away, just outside the mouth of the canyon. The students were transported in wagons and bobsleds until about 1926 or 1927 when trucks were used. This was after the roads had been cleared by way of scraping during the winter months. Up until this time all winter travel was by way of actual horse power.

Dr. Paul was concerned by the frequency of epidemics in the local schools. Smallpox, typhoid fever, and diphtheria were practically

endemic in Bingham District, and they would break out in epidemics of sufficient proportions to cause alarm. One of Dr. Paul's first acts of participation in a community activity was to organize within the schools an immunization campaign against typhoid fever, smallpox, and diphtheria.

Dr. Paul thought that this massive immunization in the Bingham School District was the first carried out on a "generalized basis" in the state of Utah. This procedure rapidly spread throughout the entire Jordan School District. Within two or three years of this type of health education program, the Bingham District had a one hundred percent immunization of the school population. During the last great drive against typhoid fever, Dr. Paul gave over eleven thousand injections. It is interesting to note that after immunizations, often the parents would contract typhoid, smallpox, or diphtheria, and so the children were kept home from school to care for them, but never came down with the disease themselves. Dr. Paul thought that this was the first thing he inaugurated in the mining camp that gave him a great deal of prestige.

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This school program started a general expansion in the schools of addressing the problems of community health. School nurses were introduced into the educational system, pre-school examinations were given, and periodic examinations were given to the entire population of primary, junior high, and high school students every two or three years. During a child's stay in the public school system, he or she was examined at least four or five times. Accurate records were kept and maintained.

The need for dental care was impressed upon the community and an overall general preventive medical program was inaugurated. This grew until it finally became a feature of the entire Jordan School District. Every doctor and dentist within the district was made a member of the Jordan School District Health Council, which was set up as a model for school health programs. This system

gained wide recognition and served as an example throughout the entire United States.

The advantages of this cooperative movement were seen most clearly during periods of economic depression. At that time the doctors and dentists took care of the students who were unable to pay. The volunteer doctors and dentists extracted teeth that had gone beyond the point of repair and removed infected tonsils and adenoids to attain as high a level of health as possible in school. Probably the highest percentage of this work was done in the Highland Boy District, where the average income per family amounted to about fifty dollars a month.

While reminiscing about the health programs in the schools, Dr. Paul remembered what a wonderful part the Community House of Highland Boy played in the life of Bingham. Ada Duhigg was the supervisor and was the most community-minded person he had ever known; her heart and soul were dedicated to the interest of all people. Although the House was operated under the direction of the Methodist Church, it was always open to Latter-day Saints, Catholics, Jews, and all races, creeds, and denominations. It was always open to community activities, whatever they might be. Dr. Paul's relationship with it came through the school health programs. The medical profession held many pre-school clinics there, as well as general health and dental clinics for the whole community. Dr. Paul and others spent many mornings taking out tonsils and adenoids. Dorothy Lowman, then a public health nurse for the local school district, described giving "tonsillectomies en masse" to twenty or thirty children a day. "You'd get one ready while the doctor was taking another child's tonsils out, then take the second one in and first one to the recovery room."

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Miss Louise Van Nay (after her marriage, Mrs. Louise Yager), was the school nurse, and her services were invaluable. She prepared the children and had all in readiness when Dr. Paul arrived, ready

to operate. Dr. Paul described her as cheerful, understanding, and very efficient, and said much credit was due her for carrying out this health program in the schools. The health program established in Bingham soon spread throughout the whole Jordan District. Often in this work Dr. Paul contacted Parent Teachers Associations, and the PTA became the medium through which the general health education of the district was promoted. The doctors and nurses instructed the children and parents on the general principles of health, and especially on communicable diseases. They taught them the proper attitudes to have toward these illnesses, and how they could be avoided, giving a fairly well-rounded education on the subject.

90 While Dr. Paul was President of the Jordan School District, polio became so prevalent that all the schools in the state closed. On the basis of the educational program the district had carried out, which had included many lectures by Dr. Samuel Paul and other outstanding doctors, the school board issued a statement that the Jordan Schools would remain in session. The school buses would continue to operate and instruction would go on as usual. The parents were given the privilege of keeping their children home if they so desired. When the epidemic subsided, after about two and one-half months, a general survey of the state showed that the Jordan District schools were the only ones to remain open and had a lower frequency of polio than any other school district in Utah. Under Dr. Paul's influence, general physiology, anatomy, and sex education soon became a prominent part in the educational system of the schools in Bingham.

Sex Education and School Board Activities

It was about 1924 when the principal of Bingham High came to Dr. Paul and asked if he would talk to the junior and senior boys. Dr. Paul was glad for the opportunity, and a two-hour session was arranged. With the students assembled in the auditorium, he asked

them what they would like him to discuss. There was such shyness present that it was impossible to glean from them what they had in mind, so Dr. Paul passed pencils and papers around and asked them to write in their own language the questions they wanted answered. He received about three hundred queries. Dr. Paul took these home and looked them over and reported to the principal that he would like to have three teachers of his own choosing go over them, compile them in general groups, and select twenty or twenty-five typical questions for discussion.

Dr. Paul took the selected questions home and studied carefully. Then Dr. Paul asked the principal to call all the parents of the students together because there was a problem which he wished to discuss with them. The time was set for this meeting and there was such a large attendance that the auditorium, which held over eight hundred persons, could not contain them all. Using overflow meetings in the class rooms, Dr. Paul stood at the back of the hall and talked loud enough for all to hear him. He presented the questions that the boys wanted discussed and got the united consent of all the parents to present the answers to the boys.

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After this program was given to the boys, the parents requested that it be presented to the girls. The girls submitted questions and followed the same procedure as with the boys. This was done in the presence of nurses and it extended over four two-hour lectures. After the program had been presented to all the high school students, a request came from the parents that they be brought together in a general assembly and be given the same lectures. Dr. Paul considered this very appropriate on their part, because they often found themselves unable to discuss these problems with their own children, and so the same instruction was given to the parents.

Like any mining town, Bingham Canyon had its share of prostitutes. Rolland G. "Red" Mayne, who dictated his own personal memoirs, left only this tantalizing comment, "Gosh, I just thought about the

town prostitutes and their association with the hospital, a story I won't tell on the written page." Dr. Paul also never mentioned this side of Bingham, though he had to be very familiar with it, and probably treated the prostitutes for sexually-transmitted diseases, as well as their customers and other members of the community.

The sex education program brought about a very wholesome feeling in the community and created between Dr. Paul and the school executives a close unity. The people soon insisted that he become a representative on the Jordan School Board. Dr. Paul served for sixteen years on the Jordan School Board, seven years as a member (from 1929 to 1936), and nine years as President (from 1936 to 1945). Dr. Paul also followed in his family tradition of community service in other ways, participating in the Kiwanis and in the Lions Club, as well as many other civic organizations. He helped found Galena Days, an annual parade and celebration for Bingham Canyon. He never ran for office, unlike his predecessor, Dr. Straup, who had served as town mayor.

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Dr. Paul described the school board as a wonderful experience because it gave him the opportunity to help form educational policies that influenced the lives of many people for years to come. One of his great desires was to see Bingham High School moved out of the crowded confines of Bingham Canyon. This desire was fulfilled in 1931 when the new high school was built in Copperton five miles away, several miles beyond the mouth of the canyon. This move proved to be very farsighted because Bingham eventually disappeared as the pit mine continued to grow and needed more space to dump its overburden waste. By the time Dr. Paul died in 1958, Bingham had few residents remaining and many of the buildings had been torn down or vacated.

While Dr. Paul was on the school board, he felt very strongly that the board should develop two systems of education in their high schools. One system to prepare the students to make a living and the other system to prepare them for college, since at that time only

about fifteen percent of these boys and girls ever went to college. Dr. Paul felt each student should decide for himself or herself. Later in life he met a man who was on the board with him and the man said, "Doctor, I often think how you talked to us and wanted us to spend more and more money on shops, on homemaking and domestic equipment, on the business department and on all kinds of things for occupational and vocational pursuits, and how well it paid off."

The district developed their vocational shops and purchased the very best equipment, and when the war broke out, the shops in Jordan District were taken over by the government for training centers. They held early morning classes and night classes there. The school had its regular hours, but those shops were used almost around the clock during the war.

Boy Scouts and Vagabonding

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Though he was a man of great energy who greatly valued his family and enjoyed socializing with his family and other people, Dr. Paul also sought to take care of his mental health through solitude, with an annual vacation that he called vagabonding. The practice began through his experience with Boy Scouts. Dr. Paul served on the Boy Scout Council and eventually received the Silver Beaver for his long service, a prestigious award given at the council level of the organization.

The Boy Scouts held yearly swim meets between the various troops in Bingham Canyon and Dr. Paul often "cooked hamburgers for everybody after the swim meet." While the hamburgers "always tasted great to the hungry boys," they also remembered the hamburgers "as being half raw." Dr. Paul's taste for rare meat obviously was not shared by the Scouts.

In his work with the Boy Scouts, Dr. Paul went out once every year to spend a full day with the boys in their summer camps and commune

with nature. These camps were at Tracy Wigwam, Camp Steiner, or at the old camp in Butterfield Canyon. Camp Steiner, high in the Uintah Mountains at 10,400 feet, soon became a favorite spot for Dr. Paul. He enjoyed going into the woods with the Scouts and asking them to each pick him a bouquet of wild flowers. When they returned from their quest, Dr. Paul would have them line up and file past so he could examine the flowers that each one had picked. This activity was very interesting to him because he found that it indicated a cross index of the boy himself. Some would bring only three or four very choice blooms arranged artistically and carried carefully; others would have a whole armful of blossoms of every type jumbled together in a heterogeneous mass. These results led Dr. Paul into a very close study of the relationship of their personalities to nature. In this pursuit he expanded his thinking to learn more about nature itself and to comprehend the relationship of people to the trees, flowers, rocks, mountains, lakes, and all the glorious things that God placed here on earth for humans to enjoy and to make companionable.

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Observing nature became an activity very dear to Dr. Paul, and he soon made it a point to spend from three to ten days every year in going off by himself and losing himself in the depths of nature for relaxation and restoration of wholesome thinking. He always used a five-passenger coupe car. The backseat was taken out and all his camping gear loaded there. A tarpaulin, cot, stove, cooking utensils, provisions, high-powered field glasses, galoshes, coveralls, pick, shovel, ax, and anything that might be needed to encounter the rough outdoors were part of his equipment. He usually left with no dress-up clothes. Coveralls were his outfit for the entire trip, and it was seldom that he even changed to a khaki suit, and he never went indoors. He called this vagabonding because most of the time he looked like an old vagabond. He enjoying going around in coveralls, looking very shaggy and unkempt, and frequently he would not shave for three or four days at a time. An old slouch hat or cap added to the picture. His only way of washing or bathing was in an open stream, when a suitable

place presented itself. He was very happy to do things this way, for he did not want to be recognized, but wanted to partake of nature in as natural a way as it presented itself to him.

These trips frequently included Yellowstone Park, one of Dr. Paul's favorite haunts, and they were always made in the fall of the year, preferably in October. In the 1950s, he switched to staying in a motel, which served his purpose nicely. The animal and bird life in Yellowstone intrigued him greatly. He liked to go off to isolated parts where he had no contact with any human being for days and would see nothing but nature. From one campsite in the northeast corner of the park, he found elk, bear, mountain sheep, antelope, moose, buffalo, and geese and ducks in migration quite visible through his binoculars. He always carried ample provisions and extra gasoline (sometimes as much as fifty gallons) and was fully equipped to stay a week or ten days. On several occasions the terrain was so rough that the four extra tires which he took as part of his equipment were ripped all to pieces. He went to Glacier National Park many times, as well as to the Black Hills of South Dakota, the Rocky Mountain National Park of Colorado, various parts of New Mexico, some areas of Arizona, and much of Nevada. He frequented both the north and south rims of the Grand Canyon of the Colorado and he spent much time in the Kaibab Forest.

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One of the Kaibab Forest's outstanding features was the bird life, especially the night-bird life. He often planned to spend one night with the full moon in that territory. He took meat with him, either cured ham or fresh meat, whichever was most convenient to obtain, and placed it as bait in trees surrounding an open space where he had made camp. To be on his cot in the open and watch the birds at night as they fed in the trees was a great inspiration to him.

Possibly the greatest source of comfort that Dr. Paul received from this type of indulgence was that which he chose to call "communing with nature." He felt that the trees and peaks, as they reached toward Heaven, were nature's cathedral towers and they formed a

natural place to worship. He felt very close to his God, and felt that he could commune and converse with Him. Many a day was spent in open conversation, either by speaking openly, or by seeking in an open type of prayer a feeling and desire that he might be brought to the realities of life, its purposes, and its dedications. Dr. Paul was sure that this contact with nature had kept him more fit to play his part in his relationships with people, and it gave him a greater understanding of life's purposes, and a greater desire to serve his fellow men. It also gave him a greater concept of what God has done for us all, and a greater sense of responsibility for what his own motivations and desires in life must be. This fellowship with nature helped him to impart a similar fellowship to his patients. It gave him a broader and keener understanding of things in general. It gave him humility in his earnest desire to comprehend the deeper meanings of nature and, in the light of this understanding, to interpret more clearly the heartbeat of humanity. This feeling of kinship gave him a greater insight into the true purposes of medicine and a greater ability to achieve a favorable end result with people in his professional relationships.

These trips always brought Dr. Paul back to his daily routine patterns of life with a greater determination, stored-up enthusiasm, and renewed vigor that lasted him throughout the year. He always looked forward with great anticipation to the next vagabonding trip, knowing what restoration it would bring and what satisfaction he would gain from it. The whole experience could be interpreted in one small phrase: "it has been the means of bringing about the ultimate accomplishment in life and in happiness, with an enduring satisfaction."

Community Disasters

Dr. Paul's early days in Bingham presented him with types of disasters that were not common in every doctor's life. The close confines of

Bingham Canyon, where everyone lived at the base of a steep slope or on the slope itself, created opportunities for tragedies in the form of fires, avalanches, and floods.

The West is prone to dry conditions, especially as the summer wears on, leading to fires. The many wood buildings in Bingham also provided ready fuel for fires, whether caused by nature or humans. A number of times, Bingham was threatened with destruction by fire. These conflagrations wiped out great sections of the town on both sides of the one-and-only road. The town had only a volunteer fire department, with little or no other fire protection, and it was a miracle that the flames were ever stopped. From the medical viewpoint, these fires had a great significance. The calmness with which the people maintained themselves through stress and strain and the venturesomeness with which they faced death were amazing. The town usually lost one or two people by falling walls or the collapse of buildings, and a great many cases of burns also resulted. Some of Dr. Paul's earliest cases of extensive hand repairs, amputations, skin grafting, and treatment of shock were experienced on these occasions.

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The worst fire occurred on September 8, 1932, when flames savaged a third of a mile of the canyon at Highland Boy for three hours. The local volunteer fire department required the assistance of firefighters and pumper trucks from Murray and Salt Lake County to bring it under control. The school building burned down and great sections of the district were burned out. Hundreds were left homeless. This and many other occasions gave the Community House an opportunity to show the great help it offered the community in being the center for the injured, as well as the homeless. Many people were provided for under that roof until more permanent arrangements could be made. Dr. Paul thought that once again Ada Duhigg of the Highland Boy Community House showed she was "a great benefactor and humanitarian," one of the finest that he had ever known.

The first thing that Dr. Paul did when he arrived at the scene of a disaster was to sit down and figure out what was needed to set up hospital facilities. Usually it was just a matter of a few hours before he had a fairly good emergency hospital established so that he and others could take care of thirty or thirty-five patients at a time. Dr. Paul set up a temporary first-aid station nearby during the 1932 fire, but fortunately, no one died in this fire. Many of the miners and families who were left homeless by the fire were already underemployed because of the Great Depression, so they left Bingham to find new jobs elsewhere.

98 Dr. Paul recalled one fire where his own home was threatened and the house next to theirs was partly destroyed. People from all over town came to the rescue and by the time he arrived home, many of their belongings had been removed from the house. Fortunately, he arrived in time to bring a halt to this rescue effort because their house was not burned or touched in any way by the fire. In fact, while trying to rush things out of the house and tracking the rugs with dirt and filth, the good citizens brought about the greatest damage. Days later Dr. Paul found and recovered the family books and bookcases, which had been hauled about a half mile from the house and set down in a vacant lot. No one seemed to know where they had been taken. It was a touching thing to him to see how people were so anxious to preserve everything.

Whenever a fire of any proportion occurred near the hospital, the staff organized evacuation crews. Usually there were thirty-five to fifty patients in the hospital, so quite a large group had to be quickly assembled. Four people were placed at the door, or in the room, or around the bed of each patient. These people were told to never move a person until Dr. Paul gave the command so that patients were not unduly harmed by the evacuation. Dr. Paul shall never forget one fire when he found his most seriously injured patient gone. When he went to view this patient, the room was empty. The patient's legs were both badly comminuted; as Dr. Paul recalled, one thigh was fragmented in eight or ten different places. Several hours later, when

Dr. Paul had located the men who had been placed at the patient's bed, he found that the patient had pleaded with them to such an extent that they had cut off all the apparatus the hospital had him in, picked him up in their arms and carried him out of the hospital and up the street a city block, where they placed him in the theater. Dr. Paul found him on the floor just below the stage, six or seven hours after the fire had been extinguished.

Another type of disaster in Bingham was the extreme floods, which were often complicated by landslides caused by the floods. These floods involved every part of the canyon at various times. The Richards experienced floods that rushed down the canyon and right through their house, leaving mud and silt several inches deep on the lower floor. The family were fortunate, for in some sections of the town, entire houses were filled with debris, rocks, and mud to within a foot of the ceiling. These floods occurred numerous times, and they seemed to repeatedly hit certain areas.

99

One of the worst floods occurred in Copperton shortly after the construction of the beautiful new Bingham High School. The buildings were flooded; however, this misfortune resulted in construction of flood control works during the Depression, which gave employment to many men. Large canals, diversion channels, and concrete retaining walls were built, which proved very successful. The school was never jeopardized by later floods.

Dr. Paul once saw eighteen inches of water come down the narrow, steep, twisting canyon road, the only road in or out of Bingham, and he realized that the parked cars were a hazard. Dr. Paul and others feared the flood would pile the cars up and create a dam across the street of such proportions that the water would be forced around and into the buildings, thus undermining their foundations and causing them to collapse. To prevent this disaster, a man supported by two ropes was sent out into the stream. He was able to pick up the front end of each car and throw it around into the current with

comparative ease because of the great velocity of the water. The driver in each car then drove it downstream and out of the canyon.

Snowslides also threatened Bingham Canyon with its most deadly type of natural disaster. The greatest snow slide the canyon experienced occurred in February 1926 when a three-day blizzard of heavy snowfall followed by rapid warming led to an avalanche engulfing part of the town. Every house in the entire Sap Gulch in the Highland Boy District collapsed, burying one hundred and fifty persons. Fires among the debris further added to the danger. Bingham miners worked three shifts around the clock, and when the slide occurred many of the people were in bed as the graveyard shift had just come off and the day shift had just gone on. Fortunately, it happened a little after nine o'clock in the morning, and most of the children had gone to school. Otherwise, at least seventy-five to one hundred more people would have been caught in the slide.

100 There are aspects to disaster other than the mere medical ones, and for these the community became responsible. Dr. Paul could readily understand his own sense of obligation as the physician to those people who were injured, but to see the entire community come to their assistance was a wonderful and touching experience for him. Within a very short time the rescuers had amassed a great amount of material. The food that was brought in was amazing, and Dr. Paul could hardly conceive of the things that arrived. The bakeries worked day and night.

The mine superintendents took all of the thousands of men and organized them into shifts working around the clock, one to two hours at a time. These relay shifts dug and searched in the snow over a period of days until the entire area had been turned over. Then they went all over the place a second time, and when spring arrived and the ground was clear, nothing of any great importance had been missed. In the end, rescuers removed thirty-five dead and fifty badly injured; the remainder came out without serious difficulty, except for shock.

Dr. Paul was amazed at the miraculous way in which some people were saved at the Sap Gulch disaster. He never forgot an incident where three young children were caught in their bathroom. One child was severely injured by being caught between the toilet and the bathtub. The circulation of one leg was impaired for about ten to twelve hours. The other two children were thrown into the bathtub, and as the house collapsed the tub was sufficiently strong to protect them and they came out with no injuries whatsoever. It was a strange thing how many people were thrown into various positions, in which they were trapped, yet suffered no physical damage. These people went through much greater mental shock than the ones who were buried in the snow.

Out of these experiences of snowslides came studies of how to prevent such disasters. Dr. Paul found it interesting to know what caused these slides. As the wind blew up one slope of the mountain, it blew the snow over the crest, creating great cones of overhanging snow on the opposite side. Sometimes these cones extended out over a distance of many feet. When a large cone broke off and slid down the mountain, it gathered the snow in lower areas and created a large moving mass which took everything with it — trees, rocks, houses, and every other object, large or small.

101

In his "Memoirs," Dr. Paul complimented the people of Bingham for the great way in which they rallied around and gave of their services and of everything they possessed in bringing about the rescue and preservation of life. He recalled that at no other time in his experience had people so diligently stood by, waiting for an opportunity to serve. Many of them did not go to bed for days. While they were not experiencing as much stress as Dr. Paul, nor so actively engaged, their vigilance was just as great.

People learned that a good way to prevent snowslides was to forestall the formation of large overhanging cones. People started to closely inspect the mountain tops in the winter time. Small cones were broken off and allowed to slip down before they reached the size where they could threaten to cause a more serious snowslide.

One of the most terrible sounds that remained in Dr. Paul's memory was the screaming of people who were caught and burned to death. Since all the houses had collapsed, those having sufficient embers in the stoves caught fire. The occupants of those houses practically steamed to death, rather than burned, because the fire smoldered in the snow and produced steam, and these people came out more scalded than burned. These cases were very challenging because they presented problems with which Dr. Paul had never before been confronted.

Frozen Victims

Besides the numerous burned and scalded cases, shock cases, and fracture cases, the frozen victims were the most unusual and challenging. Many of these people, as the houses burst open, flew out into space with snow completely enveloping them as they fell. Some were thrown a considerable distance, as much as two city blocks. Those who were fortunate enough to be entirely enveloped in snow, without coming into contact with rock or timber or other objects that could injure them, were caught in a bed of loose snow and stayed there for hours until recovered by a rescue crew.

These bodies were a puzzle to Dr. Paul at first. He never forgot the first frozen victim he encountered. Dr. Paul was with a rescue crew, telling them to be careful as they shoveled through the snow so as not to thrust their tools into a body. Just as he got through giving instructions to one of the men, he glanced down and saw a tinge of blood in the snow. The crew proceeded with care, removed the body, and took it into the Highland Boy mine office, which had been turned into a temporary hospital containing about thirty-five emergency beds. The body was so frozen that they could have placed the head on one chair and the feet on another chair and allowed two or three people to sit on the body without causing it to bend or break. Dr. Paul was astonished to find a beating heart! This presented a new problem: how to thaw out someone thus frozen.

Dr. Paul and those helping him moved the body to a cool room, forty-five to fifty degrees, and cut away all the clothing. Then he organized three teams of four persons each and rotated these teams every five to six minutes. They were sent in with soft dry towels to remove all snow and superficial frost from the body and wipe the skin entirely dry. Then they gently massaged the entire surface of the victim, and the warmth from their hands gradually removed the frost. Sometimes it took hours to revive one person. At times Dr. Paul had sixty to eighty people busy with the frozen bodies that had been recovered. It is his recollection that no one died where there was a discernible heartbeat, even when it was as low as eight beats per minute. These patients all recovered without complications.

In examining the victims after they had recovered, Dr. Paul found that they had experienced no great discomfort of any kind unless they had met with an injury from a log, a piece of timber, or from rocks that had hit them. They had no bad recollections. If they had been thrown into space and had encountered no solid object, there was absolutely no distress. As the snow settled down, there was no hysteria. Knowing they were helpless and could not move, the victims had consoled themselves in feeling that it was just a matter of being trapped and all they could do was be patient. The frost had brought them into an early state of anesthesia and they had dropped off to sleep. They said that the awakening had been no more mysterious than the desire for slumber after they knew they were enveloped in a vault of snow.

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That was always an extremely interesting phenomenon to Dr. Paul. None of these numerous patients who recovered from snowslides had a "particle of fear." He found it seemed scarcely possible that people could go through this kind of experience and have no residual shock or apprehensiveness.

After one of the fatal snowslides in the town, Lenore remembered the bodies being stacked "in pine boxes out on the sidewalk" in front of the mortuary. A nurse, Louise V. Jager, remembered an incident during the crisis after a snowslide:

Dr. Richards brought in a little five year old girl, apparently dead. He took over the treatment of hot-packing the entire body. I just handed him what he needed. The doctor's lips were moving but no sound was heard. After a time the child moved her head slightly, and little slate-colored hands became pale, then there was a sigh. She opened her eyes slowly, smiled a little and whispered, "Hi, doc, I'm cold." Tears blinded my eyes. Orders were left for her care as the doctor quickly left the room again.

Warming of hypothermia victims has only been instituted as routine medical care since the 1990s, yet Dr. Paul intuitively understood this valuable intervention to save this girl and other victims decades earlier.

104 His experience with frozen bodies soon became known throughout the country and he was occasionally asked to present the story before various groups of doctors. They always asked him, "What is the difference between being frozen above the snow and being frozen under the snow?" Dr. Paul explained that when frozen above the snow, the body froze at such a rapid rate that the living cells always rupture. He came to this conclusion because in cases where a person was frozen under the snow with an arm or leg exposed, the exposed part had to be amputated because of gangrene, while the part buried under the snow came out without any injury to the cells.

He always felt disappointed that he did not have an opportunity to move in laboratory equipment in these cases. It would have been wonderful if he or others could have moved in to one of these situations with X-ray, fluoroscope, basal metabolism and electro cardiograph machines, and various types of bio-chemical analysis equipment so that they could have followed the alterations of blood flow, the restoration of heart to normal, and the circulation in general, and thus have ascertained all of these things on a purely scientific basis.

Dr. Paul always said that something good would come out of such studies. He remembered that a few years, later Dr. Temple Fay and Dr. Bunter at Temple University in Philadelphia attempted to use

freezing as a means of combating cancer. On one of his trips east Dr. Paul spent some time with them and showed them how to freeze a body. It was out of freezing experiences like this that doctors learned how to do an amputation by freezing the limb and letting that act as the anesthetic. Many limbs were amputated under the anesthesia of freezing. He was happy to know that in the 1950s, hypothermia was used as the anesthetic in surgery on the heart. He had always held the conviction that someday this would have a practical use, and he was grateful to have lived to see some of its applications.

Years later, during the mid-1950s, Dr. Paul served on the Council of Industrial Health of the American Medical Association. The chairman of the council, Dr. William E. Shepherd, a vice-president of Metropolitan Life Insurance Company and also medical vice president, told Dr. Paul on several occasions that the first time he ever saw Dr. Paul was at an American Medical Convention in Chicago when he presented the problem of the frozen body. A doctor who was to give a paper at the convention failed to appear and there were fifteen or twenty minutes of unoccupied time. Someone called out from the audience, "Have Dr. Paul Richards present the problem of the frozen body." Years later Dr. Shepherd told Dr. Paul that many of the doctors in that audience thought he was a big liar; they could not believe that story.

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Dr. Paul's Children

Paul and Ethel's oldest child, Lenore, "was always interested" in the practice of medicine. She remembered that she "used to make rounds when I was a toddler and can even remember the days with my father when he was an intern and resident in Cincinnati . . . he always took me to make rounds with him on a Sunday or something of that sort." Lenore remembered growing up in Bingham as the "most marvelous experience that anybody could ever have." She ran around town with abandon. Even during the Depression, she received twenty-five cents every week as an allowance, which went far in keeping her entertained.

The town mortician lived across the street from the Richards family, and Lenore enjoyed going to the mortuary. She recalled that sometimes she "wasn't allowed around the hospital," but she was "always allowed around the mortuary. So I was in there helping him embalm and dress people and all that sort of stuff at the tender age of about eight. And I would go home and steal a tie or steal a pair of socks from my father because this poor man didn't have any clothes to go on."

106 While he had never particularly encouraged Lenore to follow his profession, Dr. Paul "never discouraged" her in her career choice and "was a staunch supporter" once she started her studies. She took the first two years of medical school at the University of Utah, which had not yet expanded into a four-year medical school. She finished her medical degree at Temple University in Philadelphia. After that, Dr. Lenore worked as a resident for eighteen months at Cincinnati General Hospital before earning a position as a surgical resident at the same hospital where her father had been a resident. Because of the demands of World War II, the number of residents and interns was cut before she could assume her position. About ten percent of the residents and interns were women, which was unusually high for that time, so the women's ranks were cut first, and Dr. Lenore found herself without a position. Her father had maintained his contacts at the hospital and interceded, allowing her to regain her position. Dr. Lenore remained at the hospital after completing her residency; she thought that one of the reasons that they kept her was that she "was sort of a workaholic and didn't bitch and complain about anything." Her last year was spent as chief resident and instructor in surgery. The reason that she wanted to be a surgeon is that it gave "a physician a chance to do something decisive rather than treat a patient with medications and hope for the right results."

When Dr. Lenore returned to Utah and applied for physician privileges to practice at LDS Hospital in Salt Lake City, she was denied because of her gender, a common problem for women physicians of that time. The LDS church owned the hospital, and as a mark of the

influence that Richards' name held, David O. McKay intervened. McKay was Second Counselor in the First Presidency and soon to be President of the church. C. David Richards, Paul's grandnephew, and later a medical colleague to Dr. Lenore, related the rest of the story:

It was my understanding that David O. McKay intervened and only then was she given privileges. When I was there at LDS Hospital, the [male] doctors would jokingly talk about Dr. Lenore and say, "You know I don't mind that she cuts her hair as short as mine, and I don't mind that her voice is an octave lower but mine, but damn it all, when she waits for me to get on the elevator first, she's gone too far." The point is that she could hold her own. I think she had to be that way in order to be taken seriously as a surgeon in that time in the house of medicine.

Both as a child and as an adult, Dr. Lenore sought to break out of the boundaries that contemporary society assigned to her gender. This frustrated her mother. Dr. Lenore remembered that she "was not quite my mother's pride and joy until" many years after she was a successful physician. After returning to Utah and entering practice with her father, Dr. Lenore had the opportunity to treat her mother, who had developed a "huge sebaceous cyst" on her skin. As Dr. Lenore recalled, her mother was not very certain about this whole procedure in the hands of her daughter. Her mother offered numerous objections during the procedure: "But are you sure you know what you're doing?", "Aren't you cutting too deep?", and "I can feel this and I can feel that." Dr. Lenore finally said, "Oh, mother, shut up and let me do my work!"

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Ethel Richards could never understand how her daughter "could be a surgeon," when she "could never do any dressmaking or anything of that sort?" Dr. Lenore's answer to this question: "Well, mother, the trouble with you is that you always got the fancy danciest ideas and patterns and they were all cut out and I was supposed to make them look like they did in the pictures, and I says when I work for myself I do my own cutting and then I have to put it back together."

Dr. Lenore never married, which also frustrated her mother, but Dr. Lenore doted on her six nieces and nephews. She had no one else to spend her income on, so every summer, "from the time that they were three and four years old until they were in their late teens, I would take the six of them, or the four of them, or the three of them, or however many there were, on vacations and it was always with a semi-historical background. And we did the United States pretty thoroughly." The children remembered these trips fondly. After she became a physician, Dr. Lenore also used to take her own "nieces and nephews to make rounds with me when I was practicing and they loved it and it was a vast experience. None of them ever went into medicine, but they often speak of it and it was good for them."

Dr. Paul and Ethel's second child, a daughter, was born on September 16, 1923, in Salt Lake City, joining her five-year-old sister. She was named after her mother. The family believed that the second daughter, Ethel, was Dr. Paul's favorite. Kathy, Ethel's own daughter, said:

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There were three children, but for whatever reason my mother was his favorite and the other two knew that. So if they ever wanted anything, they sent my mother to ask my grandfather. Always, always. And he'd frequently called her his pet. My pet is what he called her. So if the other two wanted something, they go, "Ethel, ask daddy for this or that," and my Aunt Lenore told me that they did that quite a bit.

Ethel (the mother) had planned to give birth to her third child in Salt Lake City, but gallbladder pain prompted her husband to give her medicine that caused her to oversleep, and she had to go to the Bingham Hospital for the birth. On May 27, 1925, at 1:10 in the afternoon, Dr. Paul delivered his own son at his hospital. The new boy was named after his father. The birth certificate lists Dr. Paul as thirty-four years old at the time of the birth and Ethel as thirty-five years old, though other records show that she was five years older than Dr. Paul.

Because his two older sisters had the mumps, the baby remained in the Bingham Hospital for the first six weeks of his life. Even after being

brought home, he remained in an upstairs bedroom until all danger of contracting mumps had passed. In those days before vaccines existed for many childhood diseases, Paul, Jr., went through the normal diseases. At eleven months, he contracted whooping cough, measles at age five in 1930, mumps in 1934, and whooping cough again in April 1936. He avoided scarlet fever by being inoculated in April 1935.

Like many affluent middle-class families of that time, the family had a housekeeper, named Louise. Paul, Jr., "bonded as a baby" with Louise and she was a constant presence in his life until he was sixteen and she left after her marriage. He used to call her "Eeze Dear," because as a child he could not pronounce Louise. Ethel often put the word "dear" after a person's name, which is where Paul, Jr., picked up the second part of his term of affection for the housekeeper.

Dr. Paul projected his ambitions on his namesake, and Paul, Jr., could not help but be reminded of his father's success at every turn in Bingham. Paul, Jr., was elected student body president during his junior year. Even at his high school graduation on May 19, 1943, he was reminded of his father's success. As president of the school board, Dr. Richards presented the diplomas to the eighty graduating students.

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Paul, Jr., maintained a B+ average in high school and left high school in January 1943 to enter the University of Utah, intending to follow his father into medicine. After two years of school, he decided that medicine was not for him, and he dropped out to become a pharmaceutical salesman. He told his father, "I don't like the sight of blood, it makes me squeamish." Clark Richards, the son of Paul, Jr., remembered of his father:

He was very much his own man, and he couldn't have been more opposite of my grandfather. He had all the warmth and love . . . a family man . . . he was just a lot more relaxed and easygoing about life. And I don't know of a man better liked than my father . . . including my grandfather. Hundreds stood in line to pay their last respects to my father. His greatness was his love and acceptance of others.

On September 6, 1947, in a ceremony at the home of his bride's parents, Paul, Jr., married Lola Jeane Gammell, a fellow University of Utah student who was also a dancer in the University Orchestral dance company.

Dr. Paul was a father figure to a boy named Red, Rolland G. Mayne. Born in Idaho, Red's mother died when he was twelve years old, leaving five children with his father. The children were farmed out to various relatives and Red lived with an uncle and aunt in Copperton. His father relocated to Murray and wanted the young man to leave school to work. Red wanted to remain in school and arranged to live with his baseball coach for a time, until the coach found a permanent place where Red could stay. Dr. Paul agreed to allow the thirteen-year-old boy to live at the Bingham Hospital, and Red lived in the hospital for the next six years (approximately 1933-1939). Red recalled in his personal memoirs that Dr. Paul "became my real father while growing up."

110 Dr. Paul gave Red a small room on the fourth floor of the hospital, with space for little more than a bed, dresser, and closet. A medical resident had a room directly across from Red, and a rest area for the nurses was down the hall. "Those nurses were like sisters to me but some did try to mother me." He ate his meals in the kitchen with the rest of the staff. Dr. Paul expected Red to work for his room and board. The teenager rose at 3:30 in the morning to light the fire in the kitchen stove (Red tried to have the fire prepared to be lit before he went to bed); then he swept and mopped the rooms of the first-floor clinic and the hallways of the second and third floors. If he had time, he would "remove the clinker from the furnace and fill the hopper with coal." A day janitor took care of the other custodial duties at the hospital.

Dr. Paul held monthly meetings with the staff and at these meetings often encouraged his employees to make themselves into better people. Red recalled, "What he was trying to get us to look at was what kind of mistakes we were making and how were we going to try" to "improve ourselves." Whenever Red had a need for pocket change,

such as out-of-town high school sporting events, Dr. Paul supplied him with some money. When Red wanted to go to a school dance, Dr. Paul gave him some money and let Red take his personal car.

When not at school, Red often helped the nurses on duty, including preparing patients for surgery. The practice of medicine fascinated him and he often watched surgeries, including births, from an observation room. Red recalled one incident when a drunk miner had been driving his car down the canyon, his elbow resting on an open window, when he sideswiped another car. At the hospital, Red held the mangled arm of the miner while Dr. Paul used a saw to cut it off. Then the doctor told Red to take the arm down into the basement and dispose of it in the furnace. Red also went on ambulance runs and house calls with Dr. Paul and other doctors at the hospital.

The mortuary was near the hospital and the undertaker also used Red when picking up the dead, embalming them, and other tasks. The one time that the undertaker refused to let Red help him was when a friend of Red's, a year older than him, died. A landslide had caused the mine train his friend was working on to derail and roll over him. As the young man grew older, Red went out to pick up the deceased on his own.

III

Red desperately wanted to be a surgeon, just like his mentor, but it was not to be. Red had hoped that Dr. Paul would be able to help him financially in his effort to become a doctor, but Mayne family lore relates that Dr. Paul was supporting his daughter Lenore in her medical schooling and so Dr. Paul was not able to help. After Red graduated from Bingham High School in 1939, he attended the University of Utah, then went into the Army Air Corps during World War II. Red worked for Pan American Airlines for a time before spending 43 years at Chevron Oil as a pipeline supervisor. In 1944, he married Ruth Ivy Oliver, a girl four years his junior who had grown up in Lark, near Bingham Canyon. They had four children. Their son, Ed (Eddie) Mayne later became prominent in the Utah labor movement and a state senator.



Chapter III

DR. PAUL AND INDUSTRIAL MEDICINE

Dr. Paul became well-known for his work in industrial medicine. He worked hard to improve safety and to improve the treatment of workers who had been injured. This effort included both rehabilitation surgery and promoting compensation and support for workers who had been injured on the job. To understand the role of Dr. Paul, some background on evolving attitudes towards worker safety in America must first be understood.

Worker Safety in America

The changing relationship between workers and business owners has often been presented as an adversarial contest between exploited workers and uncaring business owners. This narrative is exciting because it gives us villains to despise, heroes to warm our hearts, righteous feelings of outrage at injustices, and a story of triumph as labor unions grow stronger and create a more equitable relationship between the workers and business owners. There remains a lot of merit to this story, but amid all the clash and clang of conflict,

there were more subtle changes happening that too often get lost in the narrative.

The noted historian of the safety movement, Mark Aldrich, described three main drivers that “initiated the modern safety movement.” The first driver was the “regulatory approach,” which began in the 1830s when steamboat explosions caused such an outcry that state and federal laws were passed, eventually leading to government regulation of boiler specifications and inspections by government employees. While these regulations set a precedent, especially in the use of the interstate commerce clause of the Constitution by the federal government to justify federal regulations, further safety regulations came slowly. The second driver described by Aldrich was “voluntarism.” This effort was characterized by Progressive reformers trying to educate business owners and workers on the advantages of safety practices. The reformers also strove to find, publish, and publicize accurate statistics on the number of work injuries, replacing anecdotes with better data. The third driver developed as better information showed the true and appalling rate of work injuries. This approach raised the “cost of accidents” for business owners by making employers liable for accidents or injuries that occurred at their workplaces.

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Accounts by historians of worker safety often concentrate on miner safety or the safety of workers in heavy industries. There are two reasons for this: first, many efforts to increase worker safety actually started in those industries; and second, historical records are more common in those industries, while historical records in other sectors, like agriculture or service industries, are much more sparse. Steam engines, because of the high pressures that scalding steam reached, created an industrial hazard different from those that workers had experienced in pre-industrial times. It is not surprising that this technological innovation led to the first regulations. At first, steam engines were only used in a stationary setting, like pumping water out of mines, and then on ships or boats, which were large enough to accommodate the boiler, other necessary equipment, and coal. When

further technological advances made steam engines small enough, the railroad was born, first in England, and then in America. In 1830 the Baltimore and Ohio Rail Road Company opened a thirteen-mile line from Baltimore to Ellicott Mills, first using horse-drawn cars before converting to steam-powered locomotives.

Railroads symbolized American's industrial might, a network of steel rails that carried the nation's commerce. The ability of railroads to move people around, take agricultural produce to the cities, and move raw materials to factories, formed the foundation of America's growth from an agricultural nation to the world's largest economy by the late-1880s. The combination of speed and power also created a darker side to railroads because railroads also symbolized maimed bodies and death. Injuries and deaths associated with railroads happened to workers, passengers, and those people unfortunate enough to be hit by trains. Freight trains required coupling and uncoupling cars much more often than passenger trains, and workers involved in this activity suffered many injuries. Because American railroads moved more freight trains than passenger trains in proportion to British railroads, working on American trains was twice as dangerous for railway workers as working on British trains. In the interests of speed, too many employees across the country started their tasks while freight cars were still in motion and the cars caught those who were less nimble or slipped, often crushing bodies or severing limbs.

In 1893, acting on its authority to regulate interstate commerce, the Congress passed the Safety Appliance Act. This important legislation mandated more effective braking systems on train cars and automatic couplers to connect the cars together, and required that running boards, handholds, grab irons, and ladders on train cars must be made secure. Railroad companies were given five years to implement the measures and the improvement in safety was noticed by everyone, especially the Railroad Brotherhoods, the various unions of railroad workers. As the unions increased in power, they moved beyond their traditional focus on pay and other working conditions to join Progressive reformers in pushing for more safety legislation.

The Progressive Era was that period in American history from the 1880s to the 1920s when the country struggled to accommodate the changes brought by industrialization, urbanization, and immigration. Progressives often attempted to define the dimensions of a given problem to be solved by using new techniques from the social sciences, such as statistics, surveys, and rigorous collection of data. Progressives sought to improve the moral caliber of Americans by limiting vice, such as gambling and prostitution, and through the temperance movement to end drinking liquor. Progressives demanded an eight-hour workday, the end of child labor, social programs to help the poor, and the right of women to vote. They found success both in grassroots movements and through legislation on the local and national level. Not all Progressives supported all reform causes, but the movement had enough strength to affect local and national politics and completely transform America. Worker rights, working conditions, and worker safety remained consistent issues for most Progressives.

In 1901, the federal Congress passed the Accident Reports Act, enabling the Interstate Commerce Commission to require reports of any railroad-related accident that injured someone or caused a loss of at least \$150. Before this, railroad accident rates were the subject of anecdotes, but now real numbers could be assigned to the problem. The actual numbers were damning. For instance, from 1902 to 1907, derailments more than doubled to over seven thousand a year. In 1907, there were 8,026 collisions involving trains, which may or may not have resulted in a derailment. Anecdotes still provided perspective on such accidents. In Colorado, a railroad bridge collapsed under a passenger train in 1904, drowning eighty-eight people, the worst American railroad disaster up until that time.

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In 1910, Congress passed a second Accident Reports Acts, requiring reporting of a wider range of injuries and fatalities and authorizing federal investigation of train accidents. The U. S. Bureau of Labor Statistics became more sophisticated in its reported statistics. A major change came by defining a disabling injury as any injury that cost at

least one lost workday. The Bureau also began to distinguish between the causes of accidents and the type of injuries.

In 1908, Congress passed the Federal Employers Liability Act, which removed legal barriers that limited the ability of injured railroad workers to sue their employers. There was legal precedent for such a law in that business owners were already liable if a known medical problem occurred because a business owner had failed to warn their worker of the workplace danger that led to the medical problem or injury. This was the legal principle of "failure to warn." In their defense, business owners often relied on the "fellow servant rule," which argued that injured workers should bring a lawsuit against another worker whose negligence had injured them, rather than their employer. In 1912, the Supreme Court upheld the expanded law.

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WHEN THE U. S.
SUPREME COURT
UPHELD THE
EMPLOYERS'
LIABILITY LAW.
—Spencer in
Omaha World.

WHEN THE FEDERAL SUPREME COURT UPHELD THE EMPLOYERS' LIABILITY LAW.

This change in how liability worked encouraged business owners to improve safety efforts at their operations. Owners soon found that safety improvements led to increased productivity, because accidents disrupted the work routine, whether or not an injury was involved. Some historians have argued that business owners also found that they could more effectively increase their control over worker activities, using safety as their lever.

The change in liability also encouraged business owners to support the movement towards workers' compensation laws. In 1910, New York led the way by passing the first workers' compensation law. By 1921, forty-four of forty-eight states had such laws. The key idea, adopted from Europe, was that workers no longer had to sue in court and go through the difficult process of proving that their employer had been negligent. Under a workers' compensation system, injured workers were automatically compensated based on their injuries. This appealed to business owners because turned a highly unpredictable variable cost into a predictable cost. It also reduced conflict with unions.

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Many European nations chose government-based workers' compensation systems, as opposed to the business-based workers' compensation system favored in America. In America, businesses paid into a workers' compensation fund, which then paid out compensation for injuries, acting like an insurance fund. Businesses favored running their own compensation funds because they thought it would be less costly than the taxes needed to support a government-based workers' compensation system.

With workers' compensation systems coming into place, business owners now had the economic incentive to also support further efforts at improving worker safety. These efforts resonated with the nationwide Progressive movement. Under the older system of liability, since few injuries were compensated, prevention was a poor investment and money was better spent fighting claims. Compensation reversed these incentives: since few cases were contested, prevention paid off.

Another event had also focused the attention of the nation on worker safety. On March 11, 1911, a fire swept through the Triangle Shirtwaist Factory, a textile factory in New York City; 146 women died, mostly younger women, because fire exit doors were locked and the inadequate number of fire escapes were not properly maintained. On October 14, 1911, the United Society of Casualty Inspectors (USCI) was founded in New York City as a direct result of public horror at the tragedy. Three years later, the organization expanded with a name change to the American Society of Safety Engineers. This society helped create a professional class whose sole purpose was to develop safe practices, encourage their adoption, and enforce those practices that business owners and other organizations had adopted.

118 While most businesses only started to pay attention to safety seriously after workers' compensation laws came into force, the largest firm in America, U.S. Steel, had been pushing safety issues before this time. U.S. Steel was motivated by public relations concerns, since Progressives despised the company because it represented many of the worst excesses of the monopoly system. Large corporations, like U.S. Steel, were also often more effective in implementing safety measures because they were more organized and already had established procedures that could be updated in the interests of safety. In 1906, the Association of Iron and Steel Electrical Engineers was founded, drawing heavily on U.S. Steel engineers. By 1912, "safety matters had come to dominate the association's business to such an extent that it was decided to form another association." The National Council for Industrial Safety was formed in 1913. A year later, the name was changed to the National Safety Council in order "to reflect a broader focus including traffic safety and other non-industrial safety issues." A 1953 act of Congress gave the council a congressional charter.

The National Safety Council became an information clearinghouse, providing opportunities for the emerging category of safety professionals to meet together and exchange information. It sponsored trade shows where safety appliances could be promoted. In

1919 it began publishing National Safety News. Journals such as Safety Engineering, sponsored by the American Society of Safety Engineers, helped build the community of safety professionals, and textbooks emerged to present safety information in an organized manner.

The slogan, "Safety First" was first used in 1910 by claim agent Ralph Richards of the Chicago & North Western railroad. The railroad adopted a program that Richards created to reduce all type of accidents, even small accidents that might be thought be considered as of little consequence. The goal was to change the mental outlook of everyone in the corporation. The effort included forming "safety committees composed of workmen whose duty it was to discover and report unsafe conditions and practices." This bottom-up approach helped uncover unsafe practices and working conditions that management was not always aware of. The "slogan Safety First implied that safety was of primary rather than secondary importance." Productivity came second. One of the mottos of the program was "it is better to cause a delay than to cause an accident."

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Safety First spread quickly to other railroads and then to other industries. Rarely have two words been so effective at immediately communicating a message and retaining their longevity. This slogan applied not just to companies, who were subject to liability, but to other organizations. In a chapter called "Safety First" in the 1957 The Bluejackets' Manual, the U.S. Navy declared, "Accidents do not just happen, they are caused—by carelessness, clumsiness, lack of preparation, and, above all, by failure to carry out the proper safety precautions . . . Think it over. Accidents don't happen, they are caused."

The story of worker safety in Utah often followed national trends, making the Utah story a reflection of the national story. Because many worker safety innovations emerged first in either the railroad or the mining industry, and Utah was a significant mining state, safety efforts tended to also appear early in the Beehive state. Utah joined much of the rest of the nation when the state legislature established its workers'

compensation law in 1917. The law also specifically required Safety First practices, including the use of safety equipment (called safety devices).

Because of the Bingham Hospital's contract with three of the local mines, Dr. Paul found himself immediately concerned with mine safety and the practice of industrial medicine. As his daughter Lenore put it: "He was going to be the ladies' doctor and he woke up being the miner's savior." Fortunately Dr. Paul was not coming into a situation where there was little concern for safety, because mining safety had dramatically improved in the two decades before Dr. Paul arrived at Bingham. Issued only months after Dr. Paul arrived, an employee rules manual for workers at the Utah Copper mine, which later grew into the great open pit mine, illustrates how much safety standards had changed. Each job applicant was required to pass a physical examination by the company physician before obtaining employment. A Safety First office existed and received mandatory reports of every injury or accident, no matter "however trivial" the incident was. Employees recovering from work-related injuries were required to follow the directions of the physician.

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Fifty-three pages of instructions, divided into 243 rules, provided considerable details on how employees were expected to behave:

Each person accepting service, does so with a full knowledge of the perils incident to the operation of an open pit mine, and agrees to exercise the utmost care possible, in the performance of his duties, to prevent accidents either to himself or others . . . Employees, who are careless of the safety of themselves, or others, will be dismissed from the service of the Company.

All skilled positions required tests to ensure that the employee had learned the appropriate skills. Fire prevention was expected, both in keeping the workplace clean of "paper, rags, dirty waste and rubbish of all kinds," and in keeping fire extinguishers and fire hydrants inspected and ready for use. Smoking was prohibited near flammable materials. One of the more obvious rules required that employees carefully guard

anyone found to be “evidently intoxicated, idiotic or insane,” and thus might be injured on the mine site, until the police or “other proper authorities” handled the situation. Less obvious was the requirement that “operators and employees, using any machinery, must not attempt to oil, wipe, or repair inaccessible parts while machine is running. Stop the machine, before oiling parts that have to be reached by thrusting arms between wheels, belts or pulleys.” The reading of “books, newspapers, or periodicals, while on duty” was “forbidden.”

Hand, flag, and lamp signals for the trains were described in detail, as were the train whistle conventions. Because of injuries during the coupling and uncoupling of train cars, the booklet was even more specific: “The dangerous and unnecessary practice of trying to make a coupling with a foot, by giving the draw bars a kick while cars approach, is absolutely forbidden.” Another potential source of injuries involved blasting. Blasters set the explosives to break up the rock so that steam shovels could then remove the rock and place it in the train cars. Before setting off a blast, blasters were required to sound a whistle. The “large whistle on ‘C’ level” would respond with permission to blast, by sounding “a series or succession of short, sharp, quick blasts followed by one long and three short blasts.”

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This booklet showed that Utah Copper was a highly-organized workplace, with many men working specialized jobs, such as blasters, shovel engineers, brakemen, train engineers, yardmen, and flagmen. While this booklet also showed the enormous progress that had been made on safety issues, the problem of liability for occupational exposures to dust and toxic chemicals, rehabilitation for injured workers, and the creation of a full safety culture, still lay in the future. The issue of personal safety gear was not addressed, and work clothes were only mentioned in passing with the instructions for “mechanics, shop employees, and repair men,” to “not wear loose or baggy clothing. Jumpers should be tucked inside of overalls. The wearing of coveralls, while at work, might prevent clothing from being caught in machinery.”

While much progress had been made, more progress still was needed in worker safety and in industrial medicine. Dr. Paul saw these changes in his twenty-six years at Bingham, and he actively participated in making those changes. An employee rules manual issued in 1951, less than three years after Dr. Paul left Bingham illustrates how safety standards had changed from when he had first arrived. "Safety is of first importance in the discharge of duty." The psychological ideas of personal responsibility, which then dominated safety thought, are reflected in the rules manual:

Obedience to the rules is essential to safety . . . however, working safely involves more than obedience to rules. It requires the cultivation of proper habits and self-control. It demands faithful, intelligent, and courteous service . . . Each person accepting service does so with a full knowledge of the perils incident to the operation of an open pit mine . . . Do everything possible to make sure that no injury or accident will occur . . . Before beginning work, make sure conditions are safe . . . Use safety trails . . . Take the safe course when in doubt.

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The rules manual for just one category of work, employees of the Track Department, was now 109 pages long. Personal safety equipment had increased in importance. Safety belts were required when working on steep slopes or on structures like bridges. Safety goggles were furnished "by the company to employees engaged in work hazardous to the eyes." The precaution that everyone should wear safety goggles or safety eyewear had not yet been adopted.

Dr. Paul and Industrial Injuries

Most of the previous anecdotes about Dr. Paul have involved what most people consider natural disasters, such as fire, flood, and snowslides. By calling something a natural disaster, we put it into a separate category, as if it was an act of God and the accident or consequences could not have been foreseen. Good safety practices and smart building practices could have radically reduced

the probability of the so-called natural disasters that Dr. Paul experienced; those same safety practices could also minimize the consequences when a disaster did occur.

Mining disasters are certainly not natural disasters. Of all the types of mine disasters, Dr. Paul thought that the cave-in offered him more experience than any other type. He always made it a practice to go into the mine and help recover the men at the place of injury. Many times he found men pinned under rocks and it took hours to remove them. On several occasions, to save a man's life, Dr. Paul amputated an arm, hand, foot, or leg that rescuers were unable to extricate. These were difficult problems because Dr. Paul could use no antiseptics, and the only type of anesthetic he could use was a local with morphine. He found it gratifying and interesting that none of these cases ever resulted in a serious type of infection, an indication of the quality of post-injury care that the Bingham Hospital offered. Dr. Paul performed these amputations from the most awkward positions, having little room in which to work. This included being stretched out on the man, or lying parallel to him, while performing the operation.

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These mine disasters also led Dr. Paul to test his own endurance. At times he went into a mine and stayed three or four days without leaving. In his experience, few doctors had ever faced such situations where he labored under tense circumstances, "while making such a supreme effort to save a life." Dr. Paul also appreciated the Catholic priests who were of great aid to him in these tragic situations.

The Catholic faith was quite prevalent in Bingham because so many of the miners had come from Catholic regions in Europe. The priests were very willing to give Dr. Paul help at all times. He found them most beneficial in maintaining courage, faith, and confidence among the patients. He felt that if a doctor could correctly manage crisis situations like these, it could help the doctor gain the confidence of the entire community. Dr. Paul thought it was this diligence with

which he pursued his course of responsibility that helped build for him a good feeling among the people of Bingham.

Another type of mining injury occurred from mishaps in blasting. Dr. Paul saw men who were blown to small fragments or who had all their extremities blown off. The worst cases were the ones where the faces were severely involved. Before safety goggles were used, many cases of permanent blindness occurred. While Dr. Paul was affected by the emotions involved, and the consequences of these cases on families, he retained a detached interest in unusual cases that intrigued him intellectually. A good example was the story in Bingham called "Bag of Bones."

124 One of the miners fell the entire distance of the Yampa Shaft, which was something over twenty-five hundred feet. He lost all his clothing and his shoes fell off. Against all orders and all state laws and regulations, Dr. Paul rode the top of the cage up and down the shaft several times, marking the places the body had hit. He found that the miner had struck one wall of the shaft and then had been deflected to the opposite wall. As Dr. Paul recalled, the body had bounced from one side of the shaft to the other in the fall, striking as many as forty-five or fifty times as it cartwheeled down. The miner certainly died quickly from these blows.

The rescuers could not find the body and were at a loss to know what could have happened to it. Dr. Paul suggested that the rescuers pump out the sump below the shaft, and the mine management thought his thinking was ridiculous, but they had searched everywhere else. Dr. Paul felt that they must see if by some peculiar method the body could have dropped into the sump. When the sump was finally emptied by use of extra pumps, the rescuers found the body lying at the bottom. The body was brought to the surface of the station, and on examination it was very evident what had happened. The skin was all intact, but his bones were pulverized and his tissues stretched and badly mutilated. When the rescuers picked the body up by the head

and shoulders, everything ran toward his legs and they expanded to at least twice the normal size. When Dr. Paul or one of the rescuers took hold of the feet, everything ran toward the head. The body's head, shoulders and thorax expanded to fifty or sixty per cent over normal. This was really a very peculiar case. Dr. Paul had never seen anything like it before or since.

Dr. Paul sleuthed out the answer of how the body had got into the sump. On one part of the floor of the station at the bottom of the shaft was an opening between the planks of about four and one-half inches by six or eight feet. Dr. Paul recalled that he could barely push his own foot down through it. The body apparently fell directly over this hole and had hour-glassed through it into the sump. This must have taken some time, but since there was no other opening, this was the explanation that Dr. Paul and the rescuers finally arrived at.

Industrial Medicine and Silicosis

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Dr. Paul's major medical accomplishments were in the area of industrial medicine and rehabilitation. Industrial medicine emerged in treating miners and workers in heavy industries. As that type of industry has declined in the United States, the purview of industrial medicine expanded to include workers in all types of occupations, including light industry, office workers, service workers, and even work in the home, leading to the adoption of the more inclusive term of occupational medicine.

When looking at the history of industrial medicine, Dr. Paul's place in it is on the front lines, as a practitioner, not an academic. He wrote no scientific papers nor left any other kind of written legacy of his work, other than his "Memoirs." His legacy was left in the bodies of his patients, evidence of his skill as a surgeon. Focused on patient care, he encouraged the mining companies in Bingham to adopt safety measures and create a more healthy workplace; he

treated patients in the hospital and at home; and he relentlessly strove to keep up with the latest work in the field of industrial medicine, traveling back east or even to Canada to attend conferences or to consult with the leading lights in the field.

126 Practitioners of industrial medicine were not always honored for the contributions that they made. Sometimes this opposition came from business owners. A 1948 textbook for occupational medicine lamented that "Industrial management was no more interested in the working environment of its employees than it was in their living conditions outside the plant." Dr. Paul never mentioned having problems with business owners and he actually maintained excellent relations, based on mutual trust, with business owners. The same textbook also lamented that the medical establishment "frowned" upon occupational medicine because it was thought to "undermine the cherished patient-physician relationship." This was before medical insurance became common, and occupational medicine was viewed as thus inserting an intermediary in the economic relationship between patients and their physicians. Few courses in occupational medicine were offered at medical schools. Because practitioners were often involved in treating industrial injuries or physical rehabilitation efforts, a common attitude found among other medical doctors was disdain, because they considered occupational medicine specialists as mere servants of lawyers. The textbook author cried out, "Industrial medicine is not synonymous with 'compensation medicine.'"

The rate of deadly pneumonia cases among miners concerned Dr. Paul. The mines ran three shifts around the clock, and the miners came out of the mines at all hours. They were soaking wet and had to walk a distance of several miles in wet clothes. In the wintertime, when the weather was cold, they frequently arrived home with their clothes completely frozen. Their wives had to help them undress as they were unable to remove the frozen garments by themselves. This made the incidents of pneumonia very high and Dr. Paul was

very concerned about the death rate of pneumonia cases among the workers. One of his very first health programs for the employees was to obtain change-rooms at the mines so that the men could go to work in civilian clothes, change into work clothes, and then go underground. As they returned to the surface, they went to the change-room, removed their wet clothes, had a shower, put on their civilian clothes, and returned home in perfect comfort. The installation of those change-rooms in all the mines reduced the death rate of pneumonia among the workers to the point that it was soon no higher than the death rate among the people of the community as a whole.

The new doctor soon developed a rather large surgical practice at the Bingham Hospital; he had been in Bingham only a few months when surgical cases started to regularly come to him. A large percentage of these cases did not recover fully, due to post-operative chest complications. Upon investigation, a frustrated Dr. Paul found many of the men were suffering from silicosis, a disease brought about by inhalation of fine particles of silica dust during the mining processes. He made local inquiries concerning this disease and its relationship to tuberculosis, a condition called silicos tuberculosis. He found that in Bingham no medical investigation had been made. Other doctors that served the mines knew that the condition existed, but had done nothing relative to an understanding of the disease, and especially nothing by way of prevention.

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Dr. Paul made an extensive study of silicosis and its various ramifications, traveling to Mexico, throughout the United States, and into Canada, wherever anything was known about this disease, and he visited all the centers interested in the research on silica exposure. On numerous visits to Canada, Dr. Paul became well acquainted with Sir Frederick Banting, the man who discovered insulin for the treatment of diabetes. At that time Banting was conducting a research project on silicosis. Banting was not a clinical doctor, but rather a research specialist with varied and numerous fields of investigation.

Dr. Paul went into the two largest mining areas of Canada and spent weeks investigating diseases of the chest. The Canadians carried out the earliest program in this field, and the laws they made became effective in 1928. Dr. Paul first went to Canada in 1929 to see what kind of program they had inaugurated.

Dr. Paul was a frequent visitor at the Saranac Lake Laboratories, where Dr. Roy Gardner spent the greater part of his time in the investigation of silicosis. He later became research director for industrial chest diseases at Saranac. Dr. Paul became well acquainted with Roy, personally as well as professionally. This became one of the dearest friendships that Dr. Paul ever established, and when Dr. Gardner died, Dr. Paul was the only man asked to give a memorial address for him. The first symposium ever held on silicosis was held at Saranac Lake in about 1931. Numerous meetings were later held there on that industrial chest disease and Dr. Paul attended all of them, except when he was ill. The conferences were an excellent source of education since Saranac was the Mecca, so to speak, of industrial chest disease investigation throughout the world. At every meeting, Dr. Paul saw representatives from all over the globe and he met a number of notable medical researchers.

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As Dr. Paul reminisced about Saranac Lake and peculiar types of injuries, he remembered a man by the name of Donald E. Cummings whom he met at Saranac Lake. Don was head of the industrial hygiene department of the University of Colorado. Don and Dr. Paul had traveled over various parts of the United States by airplane in educational tours on the problem of silicosis. On one occasion, when they were a short distance out of Chicago, the plane hit a pocket and took a drop of a few hundred feet. Dr. Paul happened to be awake and still had his seat belt fastened, but Don, who was sitting on Dr. Paul's right and next to the aisle, had taken off his belt and was slumped down in the seat, sound asleep. As Dr. Paul felt the downward cast, he put his hand out to break Don's fall, but as the plane steadied and resumed its normal operation, Don fell out into the aisle.

As he picked himself up, he turned to Dr. Paul and asked, "What happened?"

Dr. Paul answered, "Well, we just hit one of those little pocket businesses and had a spill, so to speak."

He said, "You know, Paul, if we stick with this thing long enough they are going to get us."

It was only a few months later, in December 1942, that Dr. Paul received a call from Roy Gardner at Saranac Lake. It was still early in the morning in Bingham Canyon.

He said, "Paul, do you know anything of a plane being down?"

Dr. Paul said, "No, Roy, I haven't seen the morning paper. I have been operating all morning, but if you'll give me a little time I'll investigate and call you back."

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Dr. Paul immediately got in touch with Western Airlines and found that the airplane Don was on had left Salt Lake City around midnight, headed for Las Vegas, where he was to make an inspection of a magnesium plant. The airplane had not been heard of since a few moments after its departure from Salt Lake City. Dr. Paul kept in constant contact with the airlines and with Dr. Gardner.

That afternoon a patient came in from Cedar Valley. He was on a horse and had come up over the divide into Bingham. Dr. Paul engaged him in conversation after meeting him in the examining room, and he said, "You know, I thought as I came up into the sagebrush country that I could see the tail fin of an airplane sticking up on the flat, off in the distance."

Dr. Paul questioned him carefully on the location and told him it could be possible that he had seen the missing airplane. In a few

minutes, Dr. Paul called the airlines and reported the incident, giving the location as somewhat south and east of Cedar Fort. They informed him that their search airplane had spotted the wreckage about twenty minutes earlier. Dr. Paul set out for the scene of the accident and was the first to arrive. A few minutes later the ground crew of Western Airlines drove up and when they got into the plane, they found two passengers still alive. All the rest, including the crew, were dead. Dr. Paul thought one of the toughest jobs he ever had to do in his life was to remove the body of his good friend, Don Cummings. He was sitting in the seat that he always chose in a DC-3 plane, the single seat on the right hand side of the plane, next to the cockpit. After the rescuers had removed the body to the mortuary in Lehi, Dr. Paul called Saranac Lake and told Roy Gardner what had been done. Roy was most appreciative of this, since he and Don had been close to each other in their work, as well as being good friends.

Oscar A. Glaser

Having acquired quite a thorough understanding of the background of Bingham's industrial problems, Dr. Paul insisted that the mines in Bingham hire a man who was expertly trained in Safety First methods and who also had the ability to make an accurate analysis of the principles of ventilation. Mine management had confidence in Dr. Paul's medical judgment, so they brought in an expert in the field of industrial hygiene. His name was Oscar A. Glaser and he came from California, where he had been employed by the state Industrial Commission as a mine inspector.

Glaser and Dr. Paul spent many hours together going over safety hazards as well as health hazards in underground mining. It rested upon Glaser's shoulders to ferret out and gather data upon which a logical program could be formed. Silicosis was the first industrial disease that they thoroughly investigated for its environmental

hazard. Their greatest concern was air contamination. With three shifts running a day, it was a real problem for one group to blast, then walk out, with another shift coming right in and starting work, all under poor ventilation conditions. This produced very marked health hazards because of blasting fumes and the silica particles in the air and loose on the mine's surfaces.

The mines turned to wet drilling, and the wetting-down procedures of mining were carried out thoroughly and accurately. Glaser saw that good water supplies were provided throughout the mines, that sanitary toilets were installed, and that places were furnished where the men could eat their lunches and conduct their usual procedures in an environment that was pleasant and good from the health standpoint. All of these changes were great challenges and took much study on Dr. Paul's part as well as education on the part of those who had to undertake these corrective procedures. Glaser made regular, lengthy, and continuous studies of airborne dust from drilling and blasting. The records he established covered nearly every area of the mine and it was very interesting to correlate the environmental conditions of his research with the clinical records of various developments, which Dr. Paul gathered from chest X-rays and other medical examinations of all the employees. These records formed the background when in later years the two men suggested an industrial health research project to be carried out by the United States Public Health Service. That investigation helped lay the foundation upon which the Utah Industrial Disease Act was formulated and made into statutory law.

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Dr. Paul described Glaser a constant friend and most cooperative worker in all of Dr. Paul's safety and industrial hygiene efforts. He helped Dr. Paul materially in any type of investigation in which Dr. Paul became interested, such as the use of safety goggles, other types of mine-related research, and the study of exposures that arose as potential hazards in various parts of the mines. They established a firm and loyal friendship that lasted throughout the years.

The survey suggested by Dr. Paul and Glaser was conducted by the United States Public Health Service in 1938. The survey defined industrial hygiene as involving "primarily a program of health conservation and accident and occupational disease prevention." As with any survey, the results were limited to those companies that responded to the questionnaire. The respondents covered about one-third of the workers in the industries surveyed and only about 15% of all gainfully employed individuals. The survey received high responses from those industries that were traditionally more dangerous, such as 60% of all workers in mining and 51% for manufacturing and mechanical workers.

132 The survey found that 38.8 % of the 297 work sites surveyed had a full-time safety director, while another 17.4% had a part-time safety director; 61.3% had insurance service; 64.6% had access to a Sick Benefit Association; 65.3% of the organizations maintained sickness records; and 98.9% maintained accident records. The survey also categorized the percentage of workers exposed to toxic or dangerous substances by industry. For instance, 56.9% of workers involved in the "Extraction of Minerals" were exposed to "silica dust," and 14.4% of workers in the clothing industry were exposed to "high humidity."

Similar surveys had been conducted in Virginia, South Carolina, and Maryland. Utah compared favorably with Virginia and Maryland in their statistics, while South Carolina was far behind. Only 4.1% of industrial plants surveyed in South Carolina had full-time or part-time safety directors. Almost every industrial operation surveyed in all four states maintained accident records. Such records were the first step in safety awareness, because actual numbers were much harder to argue with or casually dismiss.

Safety First

At first the injury cases were all very shocking to Dr. Paul, but he found that he soon developed a type of thinking that worked outside of his

own emotions, and he wished only to be endowed with efficiency and skill for the good and restoration of his patients. Dr. Paul believed such experiences helped him to develop the qualities of stamina, self-control, endurance, and determination to carry on to the best of his ability. He also believe that this kind of thinking, when passed on to the patient, became a great factor in the recovery and rehabilitation of the injured man. Dr. Paul knew that the families, too, must be impressed with such psychology when around the sick bed; nurses must be educated; all attendants must be properly put in line so as to give the patient every mental, physical, and environmental support that could possibly be afforded him. Dr. Paul's previous medical training had not prepared him to understand the entire psychological context of healing from industrial injuries and he found he had to educate himself in these issues and learn from experience as time went on.

The causes for all these injuries needed attention, and Dr. Paul energetically supported Safety First measures. He asserted that no one can appreciate the necessity of prevention more than the doctor who sees these terrible injuries and has the responsibility to take care of them. The Safety First program and the rehabilitation efforts that went along with it were the first two great undertakings that he engaged in that were not technically in the surgical field. He found himself becoming prominent in these fields and spent many hours getting them started locally, in the state, and nationally. His work brought him Presidential awards in each of these fields. He was very honored to receive one of the first two of these awards given in the State of Utah. He became so interested in training the miners in the safety program and rescue work that at one time, the entire group of men underground at Bingham held rescue certificates from the State Bureau of Mines.

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For the safety movement to succeed, the management of the mines had to be converted. Dr. Paul used his prestige as a doctor to encourage the managers to organize Safety First training for all workers. This program was pursued vigorously and necessitated the cooperation of doctors, shift bosses, Safety First men, and the

general administrative personnel of the mines. Dr. Paul felt strongly that a doctor had a duty to promote good principles of medicine and promote what was best for the men whom it was the doctor's responsibility to keep well and to protect.

The concepts of industrial medicine inspired Dr. Paul to agree with the general principle that a doctor should not just take care of diseases or injuries after workers were hurt while being exposed to bad environmental conditions, but the doctor should also prevent such conditions from existing. This concept of prevention led him to push for improved working conditions for the men under his care. The program involved a great many engineering principles whereby safety appliance devices were built and many safeguards were established. He believed in the demanding necessity that all safety precautions should be taken that were humanly possible. The difficulties connected with worker' compensation and the cost of human repair were also steadily mounting. This led mine management to believe that the Safety First program and preventive medicine were financial benefits. They eventually learned how much money could be saved by increased production and how much human suffering could be avoided.

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In going ahead with the prevention programs, Dr. Paul and his colleagues soon found that poor lighting from the old use of candles caused bad eye conditions, so the carbide light came into use. They found that the carbide light was also insufficient, so electric lights were installed. The men could then see to do their work as accurately, efficiently, and safely as possible. However, workers were still confronted with eye injuries from blasting. Many men lost their vision from this source, and Dr. Paul and his colleagues were determined to correct this with the safety goggle. He thought that this was one of the most interesting projects that they undertook. Solving it occupied a great deal of time.

Dr. Paul made plaster faces and mounted them on a board structure. The faces were covered with three-sixteenths inch of paraffin so

he could determine the amount of foreign material that had been thrown at it and imbedded when subjected to the blast of several sticks of powder. These experiments were carried out under the close supervision of the mine safety departments and department of Hygiene and Engineering, as well as representatives of various optical firms that furnished the goggles with which he experimented.

The faces with goggles on them were placed in spring frames so as to have as much as possible a life-like resiliency, then the manikins were taken underground and placed in various positions in the mine to be exposed to explosive blasts. The faces were removed with the goggles on and studied. It took months and months before goggles that could withstand the blasts were perfected. After that was accomplished, goggles became a compulsory safety measure for all underground workers, and it is surprising to read statistics and discover how much eye injuries decreased.

Brain and skull injuries also showed a marked decrease when the safety helmet became a compulsory safety tool in mine work. But Dr. Paul was never quite converted to the safety shoe, because he found in many instances that it contributed to the injury. This was due to the fact that the metal which was used for protection became a guillotine sort of instrument, causing amputations where heretofore nothing but a crushing injury had resulted.

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Dr. Paul's concern with steel-toed safety shoes came from his limited vantage point. As a doctor, he saw men come in who had lost their toes to amputation and if they had not had the boots on, their toes would have been crushed, but possibly salvageable. What Dr. Paul did not see were the many men who experienced minor accidents, but did not have to report them because the boot had saved them from injury. It is to prevent these minor accidents, which could be the source of crippling injuries, that steel-toed boots have become pervasive in contemporary settings where heavy equipment is used.

Dr. Paul appreciated the fact that the safety programs cost the mining companies millions of dollars, including efforts to complete mine bolting and timbering, improve ventilation, sanitation, and lighting, and implement all the safeguarding to minimize accident hazards. However, he was sure that the savings in life, injuries, and human suffering, along with the increased production at the mines, the happiness among the workers, and the good will that was created, amply repaid the companies for this great expenditure of time, effort, and money.

Rehabilitation

136 Dr. Paul also developed a considerable reputation for his efforts in helping workers recover from workplace injuries by undergoing rehabilitation surgeries or retraining in order to resume an active work life. One person that we know of who traveled to Bingham for bone surgery on his arm was George A. Hurst, Jr., of Blanding, Utah, several hundred miles away. Multiple trips were required for consultations, the operations, and post-operation evaluations.

Dr. Paul's rehabilitation efforts were not confined only to the operating room; he also campaigned for changes in Utah law and employment practices. The kind of information provided by the 1938 United States Public Health Service survey was exactly what reformers like Dr. Paul needed to encourage the state legislature to pass legislation to promote worker health and safety. A close ally to Dr. Paul in these efforts was Dr. Louis E. Viko. They had met as students at Harvard and remained lifelong friends. Viko was a native of Park City, and after his return from medical school, he joined the practice at Inter-Mountain Clinic in Salt Lake City, specializing in cardiology. While maintaining his private practice, he also served as Health Commissioner of Salt Lake City from 1932 to 1935, helped drive the change of the College of Medicine at the University of Utah from a two-year program to a four-year program in 1942, and served

as Chairman of the Legislative Labor-Industry Committee, which drafted Utah's first Occupational Disease Compensation Law, passed in 1941.

Industrial injuries were already covered under the Workers' Compensation system set up in Utah in 1917, yet industrial medicine had come to recognize that another form of hazard existed in the workplace. Injuries from accidents were usually immediate and obvious, such as broken bones or anything requiring stitches, but occupational diseases were also a real hazard, though the symptoms and diagnosis often came years after the workplace exposure to toxic materials that led to the disease. Workers or former workers suffering from occupational diseases could not gain compensation under the Workers' Compensation system of the time.

In 1939, the Utah legislature recognized that this was a problem and set up a committee to write a draft of a bill. The committee had seven members: Dr. Viko was the chairman and acted as advisor to the committee; four members came from the worker ranks directly or from unions, including the president of the Utah State Federation of Labor and the president-secretary, District Union No. 2, International Union of Mine, Mill, and Smelter Workers. Two men represented business owners: A. H. Nebeker, a prominent lawyer, and Dr. Paul. That business owners selected Dr. Paul for this role showed the trust that he had accumulated over the years. Being a nationally recognized authority in industrial medicine gave him the expertise and prestige to be effective.

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Over a two-year period, the committee worked to negotiate a bill acceptable to all parties and put that into legal language. In the end, the bill was presented to the legislature with a request that it be passed as it was written by the committee. The legislature agreed. This was not as surprising as it may seem, since the major stakeholders, business owners and unions, had agreed to the wording of the law. A special session of the legislature did make some minor technical

changes to the law later that year. The text of the law drew heavily on a similar law passed a year earlier in Idaho.

The new law defined twenty-seven occupational diseases, including anthrax, glanders, poisoning by various industrial chemicals, skin diseases from exposure to chemicals, and "gastrointestinal disorders due to contact with petroleum products and their fumes." Damage to the wrist, elbow, knee, or hand due to constant pressure from tool use or vibration from tool use was included. Silicosis was included, which was of particular interest to Dr. Paul because of his years of study and work on that problem. Also of interest to Dr. Paul, because of his own personal experience, was "ulceration of the skin or destruction of tissue due to the prolonged exposure to roentgen rays or radium emanations."

138 Workers who suffered from these diseases would be handled by the Utah State Industrial Commission and awarded compensation in the form of twelve dollars a week, with that number being increased by five percent for each dependent child, with a limit of increases up to five children. If the worker was deceased, the compensation would still be paid, but the increases for children would be increased from five percent to ten percent. Total compensation was generally capped at \$3,000, with up to \$500 more for medical care, and up to \$150 for burial expenses.

The compensation would be paid for by the industry responsible for the injury, rather than the individual business, through the same insurance premiums that were collected for the regular workers' compensation system. With the exception of silicosis, only occupational injuries from July 1, 1941, the time the effective date of the act, would be eligible for compensation. This Act was a boon to business owners. Just as the workers' compensation system had regularized the process to obtain compensation for worker injuries, this regularized the problem of open-ended liability to occupational diseases. Any worker who opted to use this compensation system essentially gave up their right to sue their employer for additional compensation. The guidelines for filing for compensation were

strict, requiring in most cases that the worker file their claim with the State Industrial Commission within 120 days of the exposure or 120 days after leaving the employ of their employer. The Act was also a boon for workers because most workers could never afford a lawyer and the time and expense of a lawsuit, so giving up the right to sue in return for a fair hearing was a major step forward in getting some compensation. From a worker safety perspective, workers could not receive compensation if the exposure had been the result of "willful self-exposure" or was in violation of safety rules or regulations that were posted in conspicuous places at the work site. This encouraged business owners to be diligent in their safety efforts.

Dr. Paul was involved in another innovation: instead of the confusion that came from competing medical witnesses on the stand during a court trial over a workers compensation claim, Utah moved to have a pretrial conference under the auspices of the Utah State Industrial Commission, where the medical experts would jointly agree on their medical opinion of the case on hand. This made it easier for the court to use and evaluate medical opinions.

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In 1953, along with Dr. Viko, Dr. Paul received a Presidential citation for outstanding service in rehabilitation. In a eulogy, Dr. Viko described his friend's accomplishments:

Paul was not content to just treat the injured and the ill, but spent much time in measures to prevent both injury and illness. This was a field where he had to persuade management and workers, traditionally antagonistic and suspicious, to work together to a common purpose.

Then Dr. Richards got busy securing legislation providing compensation for industrial disease. These diseases, especially silicosis, miners consumption, that are directly due to working conditions. This was a highly controversial issue. Bills presented in previous legislatures had failed to pass because labor and industry could not agree. As a member of a joint labor-industry committee, Paul respected both. By its industry and labor members, he was able to persuade both to agree on an industrial disease

compensation law, and what was far more important, to have it presented to the legislature with both labor and industry asking that it be passed without change. When the legislature did pass it, it set a pattern for labor-industry cooperation in following legislatures that most other states would have considered impossible.

Then Dr. Richards, working with Mr. Wiesley, Chairman of the State Industrial Commission, was largely instrumental in setting up a system of adjudication of both the industrial disease and industrial accident laws, unique for this state and far more fair to industry and the worker than systems in other states.

But, Paul was not content to leave the disabled worker out of sight and out of mind, living, not too well, on compensation. Paul took an active part, along with Dr. Harmon, of the State Board of Education, in pioneering rehabilitation and retraining of the disabled worker to permit him to become self-supporting and self-respecting at a much higher economic level.

Otto Wiesley, the Chairman of the Utah State Industrial
Commission, who had responsibility for administering the
Occupational Disease Compensation Law, wrote this about Dr. Paul:

I became acquainted with Dr. Paul about thirty years ago at Bingham Hospital. We became fast friends. Our friendship never faltered. Together we traveled to Saranac Lake, Milwaukee, Pittsburg, Chicago and elsewhere to attend national conferences on Industrial Medicine. He was a wonderful companion and a great teacher. For thirty years he was my right arm and medical brain. I do publicly admit that the remarkable accomplishments of the Industrial Commission of Utah in the field of industrial medicine since 1941 must be credited almost entirely to Dr. Paul . . . his knowledge of medicine . . . helped us build an Industrial Medical program which amazed the medical and industrial societies throughout the world.

Operations

In his preparation for medical practice, Dr. Paul had a fair training in the overall aspects of general surgery and the general practice

education for one year, and then he specialized in gynecology and obstetrics. In Bingham his immediate medical problems were those of surgery. There were many cases of broken legs, arms, backs, skulls, and both simple and compound fractures in every part of the body. This was in the days before the safety campaign had been inaugurated.

Many of these fractures were of a severe compound type and needed extensive clean-up jobs and technical restoration of the tissue and bony structures. In his first few years of practice, Dr. Paul operated on a great number of skull fractures. By the time he had been in practice for ten or twelve years, he had removed enough bony structure from skull fractures to fill a half-peck measure. This gave Dr. Paul a wealth of experience in trauma surgery and a confidence to take on surgeries that were thought too difficult or impossible.

Chest surgery in Dr. Paul's early days in Bingham was almost unknown, yet mining injuries required that the doctor innovate. Many of his cases were blast injuries where miners had swung their picks and accidentally hit a blast hole that was still filled with one, two, or three sticks of dynamite. This happened because an explosives man had forgotten to ignite the charge or a misfire had occurred. The dynamite exploded, turning the surrounding rock into shrapnel. Many times Dr. Paul removed rocks (ranging from the size of a marble to the size of a baseball) that had penetrated into the lung cavity or the abdomen. By good principles of surgical cleanliness (and this was before the advent of sulfa drugs or antibiotics), he had amazing results.

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The first case of a radical opening of the chest that Dr. Paul ever saw was one of extreme emergency on which he operated under his own guidance. A car had run over one side of the man's chest. All the ribs on that side were fractured and the chest cavity was laid open so that by the time the victim arrived at the hospital he was in extreme distress, with one lung completely collapsed. Dr. Paul could look into the victim's chest cavity as easily as he could stand at an open door and look into another room. The doctor soon had this challenging

case on the operating table. He cleaned the wounds thoroughly, approximated the structure as much as possible, removed what bone was necessary, closed up the soft tissue, and aspirated the air from the thoracic cavity. By the next day the man was practically out of shock. Good results with this type of injury gave Dr. Paul "great boldness, so I had no timidity or fear of tackling any job which confronted me."

Dr. Paul treated fractured pelvic cases where men fell and straddled a solid object that practically split the pelvis through the middle. He could look into the abdomen, up through the rectum and bladder and, in some cases, the viscera were hanging out. He had many cases of this type and found that bold immediate procedures brought about good results. He had seen men completely eviscerated without the fracture of a bone. Many a case came to him where the abdominal cavity had been opened and the entire contents wrapped in a towel to hold them in position. A high percentage of these men completely recovered and went back to work.

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In the treatment of fractures of the spinal column, Dr. Paul varied from the conventional medical wisdom of the day. The prevalent concept was that such a fracture would result in a man's complete and permanent disability. Dr. Paul soon learned that a fracture of the spine, with no serious nerve damage, need be considered only as other fractures and should be treated as such. As soon as a patient came in with a back injury, he was encouraged to believe that he would eventually return to his regular type of employment. This began in 1923 and was Dr. Paul's first big campaign in the field of rehabilitation. Dr. Paul always held that you should not cripple a man mentally by impressing him with the severity of his injury, and then cure him physically. This philosophy dominated Dr. Paul's medical practice from his earliest days in Bingham.

The fractured spine patients gradually began to go back to work. Dr. Paul experienced a great deal of opposition in having these men rated as fit before the Industrial Commission, since many local

doctors held to the theory that these men should never again do hard, strenuous labor. Dr. Paul believed that this began establishing a firm reputation for him before the State Industrial Commission, which he enjoyed for many years. In over two hundred spine injuries that involved the weight-bearing structure, besides many other spine fractures that had not involved the weight-bearing structure, he found that eighty percent of the men went back to their regular employment. These were cases that had been treated simply by postural correction of the back deformities, those that have had surgical interference for the release of nerve pressure, and those where the back had been stabilized with a bone graft.

By the early 1930s, Dr. Paul had operated on a great many back cases, both for disease and back injury. Because of his familiarity with the bony structure of the back, the spinal cord, and its nerve distribution and mechanism, he was one of the first individual doctors to study and perform disc operations. On several trips to Boston, he discussed the possibilities of intervertebral disc operations with Dr. Joseph Barr and Dr. William Jason Mixter. After their first such operation in the fall of 1932, Dr. Paul came home and did several intervertebral disc operations with good results. His reputation spread rapidly, and during the 1930s and 1940s, up until the time he left Bingham in 1948, he did hundreds of operations for either the simple removal of a disc or a secondary operation for stabilization of the back after a disc had been removed. These cases came to him from far and wide. In one year he had cases from twenty-two states throughout the country.

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Dr. Paul recalled another operation that came out of Boston, and he felt deeply indebted to all those great medical centers that made advances that he could apply in his practice. On one visit to Boston, he met Dr. E. Amory Codman, who was doing a great deal of research work on injuries of the shoulders. Dr. Codman had found that a rupture of the supraspinatus tendon in a dislocated shoulder was the great residual factor of persistent disability. After Dr. Paul's investigation of shoulder problems with Dr. Codman, he came

home and operated on three ruptured supraspinatus tendons in one month. The results were good and this brought to Dr. Paul a great influx of men and women with shoulder disabilities, and he operated on a large number of such cases within the next few years. Dr. Codman had a student at Harvard named Dr. William Stevenson who did his dissection work. Years later, this same Dr. Stevenson operated on Dr. Paul's hands in New York City.

144 Dr. Paul made two to four trips a year. He spent two to six weeks on each visit studying and investigating the methods being used in the large medical centers throughout the United States and Canada. This travel, with his plentiful practical experience in surgery, afforded him the opportunity of participating on many medical panels and discussions wherever he traveled. After a few years of this experience, Dr. Paul was invited to make a presentation to the American College of Surgeons for admission into that organization. Admission consisted of reporting on one hundred unusual cases that had come under Dr. Paul's care. Charts and the case history of each patient had to be submitted in detail. The required work was submitted, and an immediate acceptance was sent to Dr. Paul. He was initiated into the American College of Surgeons in Boston and found that he was the first in his graduating class from Harvard to be recognized by this organization.

An Awful School Bus Accident

On December 1, 1938, a Thursday, early in the morning, Denver and Rio Grande Western No. 31 left Helper, Utah, pulling twelve loaded freight cars, thirty-eight empty cars, and a caboose. The second-class freight train, named the Flying Ute, was running late, but that was not unusual. It lost even more time as it made its way north, running four hours and nineteen minutes late when it passed Provo. A light snow was falling in the cold morning.

Outside of Riverton, a country road approached the railroad track, but turned to run parallel to the railroad track for 2,600 feet, almost a half-mile, before turning at a right angle to cross the tracks at Burgon's Crossing. As the train came to the road, the fireman on the engine saw that a school bus was on the parallel section of the road, some distance ahead of them. They had seen school buses on this road before. Visibility was reported to be up to a half-mile and the open country contained no obstructions. The head brakeman later testified that he could see the end of his train at all times from his position in the engine.

Trains were required to sound a whistle whenever they approached a railroad crossing. A whistle board on the side of the track, 1,430 feet from Burgon's Crossing, reminded them of this responsibility. The crew sounded the whistle and kept it blowing as they approached the crossing.

The bus driver, twenty-nine-year-old Farrold Henry Silcox, had been driving the bus for almost three years, and had not been cited for any traffic violations as a driver. Silcox was familiar with the route and the road. He had already picked up thirty-eight students. Band instruments being brought to school by the students were piled on seats towards the front of the bus.

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The morning bus run could be a hard drive on winter mornings because there was no heater on the vehicle. The windshield was equipped with a defrosting window and windshield wiper. The driver ran a strict bus, not allowing students to stand or be too loud. Students reported that on that morning there was no "unusual noise, loud talking, laughing or singing." The bus windows were closed because of the weather and steam covered all the windows, with the exception of the windshield.

The bus turned and stopped at the railroad crossing. State law required, as did school district policy, that school buses come to a

full stop before crossing railroad tracks, and "before proceeding on his way, the driver must be certain that no train is approaching from either side." Normally, at this time of day, no trains were on the tracks. Investigators later watched the tracks themselves and found that on average only twenty-two trains a day used this track, with a tendency for more traffic to occur in the middle of the night. The bus driver was on the left-hand side of the bus, while the train approached from his right. The train engineman was on the right side of his engine, while the bus was stopped on his left side.

Seeing no train, because the side windows were steamed up, and not hearing the train whistle because the windows were all closed, and not expecting a train at that time of day, the bus driver worked the gears and proceeded forward. None of the students remembered hearing the train whistle, though one girl remembered hearing another student towards the front of the bus cry out, "Train!"

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The fireman on the train was still looking out the side window when he saw the bus start to move forward. He cried out a warning to the engineman, who immediately applied the emergency brakes. The valve-pilot tape on the engine later showed that the train was going fifty-two miles per hour. Trains on this section of track were allowed to travel fifty miles per hour.

At 8:43 a.m., the freight train hit the center of the bus.

Sixteen-year-old June Wynn lived near the crossing and was standing at her doorway, waiting for the bus to pick her up. She described the accident for a reporter:

"I could see the lights of the bus and the train half a mile away, and I watched while the bus pulled up to the tracks. It stopped today the same as usual. It always stops for the crossing. But this time it started up again . . . The bus just sort of exploded and went dragging off down the tracks."

The bus was made completely of steel. The right side of the bus

was sheared off and the body of the bus came to rest one hundred feet from the railroad crossing. The more sturdy chassis of the bus was pushed by the train engine almost half of a mile further down the track before the train came to a stop. Debris from the bus was scattered along that half-mile. The bus chassis forced the lead pair of train engine wheels off of the tracks, and welding torches were necessary to cut the bus chassis out from underneath the front of the train engine.

David Witter, an unemployed twenty-two-year-old truck driver, was riding in a box car, walking back and forth, trying to keep warm, when the train came to a stop. He got out to see "the awfulest thing I ever saw." At first, because of all the carnage, he assumed that the train had hit a cattle truck. Then he saw the children in the snow, some lying still and some looking "bewildered." Those that looked well enough to be moved, he carried to the warmth of the caboose. "One little girl was standing there screaming, holding for dear life to a little pocketbook." A Salt Lake Tribune newspaper reporter arrived to find "fragments of bodies, tattered bits of school texts, battered band instruments and twisted pieces" of the bus scattered along the tracks on the snowy landscape.

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Within half an hour, hundreds of people had gathered at the site: "hysterical parents," rescue crews, law enforcement officers, ambulances, and anxious onlookers. Searching through the wreckage, Highway Patrolman Bob Howard found his own niece and nephew. Other workers walked along the tracks with baskets and sacks, gathering bus parts and body parts. The injured and the dead were taken to the Salt Lake General Hospital. The New York Times also reported that Sheriff Grant Young ordered "a thorough search of the snow-covered area near the track to recover parts of bodies and clothing."

Twenty-two students and the bus driver died immediately. Another student, fifteen-year-old Rela Marie Beckstead, died at St. Marks Hospital three days later. The other fifteen students lived, though

seven of them were gravely injured. It was the kind of accident, with so much force involved, that death and life were a matter of inches. The girl who heard another student call out "Train" woke up to find herself in the snow with only slight injuries. Other students survived by happenchance. One girl was reported dead, though she was not on the bus. Another boy, who had a perfect school attendance record for the year, helped his father with the family grocery store in the morning and was too late to catch the bus, though he ran after the bus in an effort to catch it. His sister normally rode the bus, but had taken another bus instead. Two other teenagers were delayed by the snow and missed the bus.

148 Dr. Paul heard about the accident via a telephone call and immediately rushed to the site of the accident, some ten miles away, pausing only long enough to try to find Red to bring him along, but could not locate the boy quickly enough and so left on his own. Dr. Paul "stayed on the scene until all the bodies had been cleaned up. Many of them were mangled and torn into shreds and small fragments. We got underneath the train with whisk-brooms and dust-pans and gathered pieces of flesh, bowel, clothing, hair, skin and the like." Dr. Paul was also concerned about the psychological fallout from the accident. He took particular care that all traces of the victims were collected or removed. He intuitively understood that people would visit this site, perhaps as part of the process of grieving, and finding blood or flesh would be simply horrifying. After the train had been moved away, the workers "took flaming torches and seared the ties and rails and removed all blood spots until there was no remaining evidence of the accident."

The bodies were put together in similar caskets as carefully as could be, and inasmuch as many were fragmented, experts were called in. One expert, who had the ability of matching like tissues, came from Denver. Dr. Paul recalled that some "bodies were torn to the point where no identity could be established," except through dental

records. A special local Red Cross relief committee was immediately formed to direct aid to the accident victims and their families. The committee planned to raise funds to pay for medical bills and other immediate needs, as well as to pay for long-term care for those crippled in the accident. Dr. Paul served as the chairman.

The nation's newspapers ran the accident as front page news. The Salt Lake Tribune reported that local fog had been heavy, making visibility a problem, though later investigation showed that this was not accurate. Six mass funerals were planned for Sunday and Monday. Two of the funerals, morning and afternoon, were held in the school auditorium of Riverton Junior High to make room for the many mourners. Ten seconds of silence were held in Sunday Schools throughout the state on Sunday. Jordan High School suspended classes after the accident and did not reopen until Tuesday. Riverton Junior High was closed on Monday. Other school children in the Jordan school district were asked to go to the schools nearest to their homes on Monday, regardless of whether they attended that school normally, where they assembled at 10 a.m., to stand at attention and "pay silent tribute to the memory of their deceased schoolmates." Then the students were dismissed for the rest of the day.

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Other coverage asked the obvious questions: what had happened, why had it happened, and how could it be prevented in the future? Weber County formed junior traffic patrols, where a student would get out at railroad crossings to see if a train was approaching before the bus would be allowed to cross the tracks. The federal government sent two investigators from the Interstate Commerce Commission. Numerous agencies from the state government conducted their own inquiries, including the Public Service Commission, the Industrial Commission, the Department of Public Instruction, and the Highway Patrol. On the local level, the county sheriff conducted an investigation to report to the county attorney.

Dr. Paul and the Jordan School District board met in "long meetings with parents of the victims." People wanted to know how this accident had happened. The explanation according to Dr. Paul:

We allayed all hysteria and concluded from every possible angle that this was purely an accident. The locomotive engineer said that the bus stopped. He knew it stopped because he saw it standing there, but because of a peculiar type of cloud formation that was hanging near the ground, the driver's view must have been obscured and as he advanced forward onto the tracks, the train struck the middle of the bus. We felt that inasmuch as this was purely an accident we should get the parties together and come to some kind of an agreement regarding the settlement.

The school board "advised the parents against employing any attorneys" and the Denver and Rio Grande Railroad gave the school board the "responsibility of adjudicating the losses." Dr. Paul took on the personal responsibility to "adjudicate lost functions in those who had been injured," a similar responsibility that he often performed for the state Industrial Commission when medically describing the resulting permanent disabilities from industrial injuries. According to Dr. Paul:

The families agreed to a reasonable settlement for those who had been killed. This whole case was handled through the understanding which the Board achieved with both the railroad and the families of the students who had been involved in the accident. To me, it was a very remarkable thing that we could conduct the whole accident as a school problem and have no hard feelings, no legal involvement, and no attempt at placing the responsibility.

While the injured students had been taken to the county hospital, afterwards the victims went to other doctors for further care and rehabilitation. Dr. Paul cared for many of the cases because of his reputation for such care. He worked on several students "with broken backs and some with compound fractures" of their limbs. "Some of these patients were very disfigured, but with plastic surgery and restorative types of procedures all the injured turned out very well."

Some of the students remained his patients for the next two decades.

This was the worst school bus accident up until this time in American history, and remains the worst bus-train accident. Two later accidents that exceeded the death toll for school bus accidents both happened in Kentucky. In 1958 a school bus near Prestonsburg, Kentucky, collided with a tow truck and plunged into a river, drowning the driver and twenty-six students. Twenty-two other students managed to swim to safety. In 1988, near Carrollton, Kentucky, a drunk driver in a pickup truck collided head-on with a former school bus being used as a church bus. The accident initially caused only minor injuries, but the bus caught fire and twenty-seven people, mostly children, died trying to use the narrow rear exit. Only seven people escaped. Other train accidents have killed many more, usually when a train with passengers derailed or two trains collided.

The nation already knew that it had a problem with school bus accidents at railroad crossings. In the previous ten years, four school buses had been hit, killing a number of people. The public conversation immediately turned to the safety appliance that would have stopped the Utah accident from happening: a train-actuated crossing guard. The sole warning sign at Burgon's Crossing was a crossed-buck sign reading "RAILROAD CROSSING." There were 2,200 railroad crossings in Utah, of which only 125 were "protected by train-actuated signals" and twenty more had watchmen. The State Public Service Commission had "recently recommended" that 137 more crossings receive additional safety appliances."

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This episode effectively illustrated Dr. Paul's attitudes on safety and the causes of accidents. He analyzed what happened, seeking to find a root cause, which he found in the weather conditions. The search to find a person to blame by their actions or lack of action was common in safety thinking at this time, dominated as it was by the psychological approach. The bus driver was exempted from blame because of the weather. Dr. Paul did not take the analysis one step

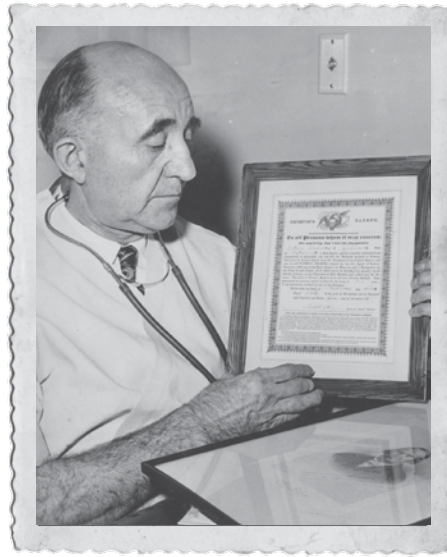
further, though many others did: a safety appliance, if it worked correctly, certainly would have saved lives.

The official accident report for the Interstate Commerce Commission finished with some common sense recommendations. They recognized that not only was the accident a result of not have an additional safety appliance, like the crossing guards, but it also reflected the lack of the correct rules to govern driver behavior. Such rules, turned into habits, made a person's activities safer. The recommendations:

- That more stringent rules covering the operation of school buses over grade crossings should be prescribed and strictly enforced.
- That all drivers of school buses be required to open the front side door when the stop is made at each railroad crossing at grade.
- That, whenever practicable, buses should be routed so as to avoid grade crossings that are not protected by watchmen or devices to give visual warning when a train is approaching.

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While the number of train-automobile collisions and fatalities have fallen in number over the years, the problem still persists despite the widespread use of safety appliances at crossings, such as warning lights and crossing arms, and the safety education programs and public service advertisements. In 2007, there were 2,752 collisions involving trains in the United States and 335 people died.



Chapter IV

DR. PAUL IN THE FINAL SEASON OF LIFE

Leaving Bingham

All physicians must balance work and their life. Just like many doctors, Dr. Paul could not find a way to limit his total devotion to his patients and his practice, and he did not see a reason to limit his devotion. His marriage suffered, but his patients were rewarded with a healer totally devoted their well-being. As they grew older, while living in Bingham for over two decades, Dr. Paul and Ethel grew farther apart. Married to a driven man dedicated to his patients, Ethel often felt neglected. Though they lived in the same home, they took separate vacations and lived separate lives.

Ethel filed her own tax returns because she owned stocks and property independently from her husband. For instance her 1944 income tax return showed that she had income of \$2,460 from the Bingham Canyon Hospital (her husband apparently shared the proceeds of the hospital with her), \$826.90 from stock dividends, and \$34.55 from interest. Her stocks included Kennecott, Raven Refining, Emerald Oil, Utah Idaho Sugar, Ricco Argentine, and H. S. Steel, among

others. She owned a brick home and received occasional rent from it. Other tax returns showed ownership of a lot in Wasatch Resort.

Their children were grown and on their own. Their oldest daughter, Lenore, was back east working on her medical education. On June 4, 1946, their daughter Ethel married Alvin W. Baker, an academically ambitious young man who eventually went to the Massachusetts Institute of Technology (MIT) to earn his doctorate. He later became a research chemist for Dow Chemical. On September 7, 1947, Dr. Paul delivered his first grandchild, a daughter that Ethel and Alvin named Kathie. While the seasons of life continued, now that he was a grandfather, a medical problem that had long tormented Dr. Paul became acute.

154 Dr. Paul began damaging his hands with radiation during his medical training and continued to do so during his practice, exposing himself to radium and X-rays, both from faultily constructed machines and by use of the fluoroscope in setting fractures and locating foreign bodies. A great many ulcerated lesions developed on his hands. They were so numerous and so uncomfortable that during the last few years of performing surgeries in Bingham, he was unable to scrub up, except by using the finest Italian castile soap and a soft sponge, or a substantial piece of cotton.

His damaged hands served him well, since he was a skilled surgeon, but the problem had become worse. In October of 1948 Dr. Paul went east, had his hands examined by several doctors. Specimens were taken from several lesions and all were found to be malignant. He had cancer of the skin on his hands.

He announced his intention to close his practice in Bingham. When Dr. Paul left Bingham in 1948, the community held a farewell ceremony, organized by the Bingham Lions Club, at the Bingham Catholic Organization Hall on the Saturday after Thanksgiving. Over eight hundred people attended. The printed booklet for the

ceremony was titled "A Testimonial to a Great Guy." The doctor was presented with a scrapbook containing letters of appreciation from "civic, service and religious organizations."

Surrounded by this outpouring of love, Dr. Paul closed the doors of the Bingham Hospital and Clinic on the last day of November and moved away from the mining town. Dr. Paul settled his wife in Salt Lake City and prepared to travel back to New York City for an arduous series of operations. Having been the doctor for so much of his adult life, Dr. Paul now had to return to the experiences of his sickly youth and become a patient again.

On December 6, 1948, he left for New York City. Arriving there, he placed himself in the hands of Dr. William Stevenson, whom he knew from earlier association with Dr. Codman. On December 16, 1948, Dr. Paul underwent radical surgery of the left hand for removal of all lesions and the entire covering of all fingers and posterior portion of the hand by split-thickness skin graft. He recovered quickly from this operation, being in the hospital only three or four weeks. His daughter Ethel and her husband, Alvin Baker, were located in Cambridge, Massachusetts, where Alvin was attending MIT. Dr. Paul spent several days with them, renewing acquaintance with his little one-year-old granddaughter, Kathie.

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Early in February 1949, he returned to New York City for surgery on his right hand. These were long, tedious sessions, requiring many hours. Following the operations on his right hand, he had a "neurovascular collapse" and suffered a great deal of pain for several months. The whole program of this corrective measure was well laid out. The doctor said he could expect a disability of at least nine or ten months. Dr. Paul made all preparations to accept a disability of a year and a half, an indication of how he attempted to handle life rather than let life handle him. He also practiced left-hand writing. Left-handed and right-handed signatures were placed in his bank so he could make out checks either way. His activities for diversion between

surgeries were planned in advance, including visiting his daughter Ethel in Cambridge and his daughter Lenore in Cincinnati.

One thing that would seem peculiar to many people was the fact that he had no desire for any of his family to be with him while he was going through this trial. Dr. Lenore came on each occasion of more significant surgeries, which involved eight or nine hours, and Ethel came for two or three days during his extreme suffering, but other than that he cared to have no one around.

156 Due to ischemia, or lack of blood supply from long use of tourniquet during surgery, the terminal portion of his right middle finger fell off. The pain was terrific for nearly two months and they gave him large quantities of morphine and codeine. After leaving the hospital, he spent long hours walking through Central Park, trying to nurse his difficulties and bring himself back to a normal life. As he walked in the park, he repeatedly bounced and caught a ball to limber up his hands and to keep them from becoming stiff. People passing him often shook their heads and twirled their finger near their ear as if to say, "He's balmy." Dr. Paul got quite a chuckle out of this. After fighting off his new-found addictions to morphine and codeine, he found that the greatest relief from pain was good old-fashioned whiskey. He lapped it up, so much so that at one time he became afraid of acquiring the habit. But after the pain had sufficiently subsided, he immediately went off liquor and had no more difficulty afterwards.

In the final phases of this period, he asked his brother Preston to come back and spend some time with him. Preston did so, and they spent two or three weeks together in New York and had a most enjoyable time. Dr. Paul thought that Preston's visit was one of the greater contributors to his recovery, because Dr. Paul had been alone for so long that a close companionship was very satisfying. Preston was a busy man, and Dr. Paul felt most appreciative of the kindness Preston showed by coming and spending that amount of time with his

brother. The two had always been very congenial and happy in each other's company and this brought them even closer together.

A grand surprise that came out of this whole experience was found in Dr. Paul's relationships with his patients. He was astonished at the way that they rallied around him during those seven or eight months of his confinement and suffering. He did not know how he could have managed without them. They showered him with the greatest kind of consideration; during the time he was in New York, he received over 3,000 letters and numerous gifts. A selection of these letters survived and show that Dr. Paul was genuinely loved and that many people remembered his laughter with fondness.

His hotel and hospital rooms were filled with remembrances, and later in life when he thought of the many letters asking him to take courage and "to lick" his problems because his friends and patients needed him, his heart welled up within him with thankfulness. The hospital attendants said, "We have never seen anything like it in our lives. We have had people get fan mail for a few weeks, but yours goes on for months and months. It is very unusual and very marvelous."

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Following this period of disability, and to complete his convalescence, Dr. Paul went to Idaho and spent approximately twenty months on ranches that he owned with his good friend Dr. Rigby. His time was spent in the usual activities of farming and ranching, but principally in the breeding of fancy cattle. The two doctors acquired one of the larger herds of Anxiety strains of Hereford cattle in the United States. This activity became of great interest to Dr. Paul and put him in contact with an entirely new group of men. He traversed the entire United States several times, selling and purchasing cattle and attending cattle shows. He found the type of individuals that he met in this setting extremely interesting. He attended several conventions that were purely educational, and he found that there truly was a lure to the type of life a cattleman led that fascinated him.

During the latter part of the period of convalescence, Dr. Paul's daughter Lenore graduated from her long residency of surgery at Cincinnati General Hospital and was about to embark upon the practice of surgery. She asked him if he would like to return to his profession and help to give her a start in her work. This he was delighted to do, for he saw the opportunity of bringing into being a dream that he had cherished throughout the years.

During his stay on the ranch, much of his spare time had been spent in drawing plans and designs for the establishing of a group practice clinic, and by going back into practice he hoped to make these plans a reality. With his malignancy now arrested, he settled his affairs in Idaho and returned to Salt Lake City, setting up a temporary practice at 202 East South Temple with his daughter Dr. Lenore. They shared offices with Drs. Esther and George Gross for eighteen months. This new practice setting is where Paul Richards became known as Dr. Paul and his daughter as Dr. Lenore, since having two Dr. Richards was confusing.

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Ethel's health had also become a problem as she developed "the palsy." C. David Richards, Dr. Paul's grand-nephew, who later became a physician, remembered that Ethel had a "classical pill-rolling tremor in both of her hands" that is associated with Parkinson's disease. The problem came early to her, when she was in her fifties, and was debilitating, causing tremors in her face and hands.

Parkinson's disease has been a disorder defined since the early nineteenth century, though the English physician who first described it in 1817, James Parkinson, called it "shaking palsy." In 1862, the famous French neurologist Jean-Martin Charcot renamed the disease Parkinson's disease. Lacking any understanding of what caused the disease, the popularity of the diagnosis waxed and waned. In the 1920s and 1930s, Parkinson's was thought to be a psychological disorder. The diagnosis was confused because of the sudden onset of a similar disorder in 1915, encephalitis lethargica, called the

“sleeping sickness” or von Economo disease. After only eleven years, in 1926, the epidemics of encephalitis lethargica disappeared, leaving damaged postencephalitic survivors behind that required long-term medical care. Encephalitis lethargica was probably caused by a virus, and at the time physicians and the general public thought that it was a side-effect of the great flu pandemic of 1918-19, though that view is no longer held.

Dr. Paul would not have diagnosed his wife with Parkinson’s because at the time Parkinson’s disease was confused with postencephalitic problems. Only in early the 1960s, after Dr. Paul’s death, were the diagnostic categories clarified based on a better understanding of brain chemistry. To describe his wife as having “the palsy” was useful in describing the symptoms and also scientifically accurate for the time. A more accurate diagnosis would not have helped, since effective treatments were not available at that time. Coping with the symptoms was the best course of action.

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Ethel coped with the disease as well as she could, becoming more confined to her house, and eventually bed-ridden. Her grand-nephew recalled that “she would just sit at home. She would talk to you and be very nice, but just shaking like crazy.” Ethel required continuous care, and an arrangement was needed so that the family could partially provide the care. Dr. Paul built a duplex home at 1837 Wilson Avenue, near where he had grown up in Salt Lake City. Dr. Paul and Ethel lived in one half of the duplex with Dr. Lenore, and he strongly encouraged his son and his family to move into the other half of the duplex. A housekeeper named Amelia completed the household. Dr. Paul’s grandson remembers that “it was one great big blended extended nuclear family and although there were two doors, we came and went without knocking . . . there was even a buzzer if my grandmother needed something that she could ring and we’d come running.” The family was helped by nurses that came every day, the same nurses that Dr. Paul had used in Bingham Canyon, who drove all the way from Bingham to Sugarhouse to perform this service.

As Ethel declined, "she lost her musculature in her eyes . . . she didn't have the ability to keep her eyes open and they were always shut." Her grandson remembered that she could keep them open for about five minutes and then they would slowly shut and she'd just sit there in the dark. One of the things he would always do when he walked into her room was to gently open her eyes so she could see. And then he would read her the stock quotes for penny stocks. Ethel had considerable success investing in penny stocks and enjoyed her ability to continue to engage with the world outside of her home.

Dr. Paul slept in the basement on a narrow bed, a good practice for the family, since he snored loudly. While the surgery on his hands had been successful, Dr. Paul was in serious pain for the rest of his life. Every day, after coming home from work, he would verbally vent his frustration with the pain. His grandson remembered that "*He'd save up the pain all day long and then he'd come into the living room and he'd bend over the grand piano and then he'd let out a yell . . . shriek in pain . . . it was spooky.*"

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His grandchildren clearly brought him a lot of joy. They called him Poppy and called their grandmother Nana. Dr. Paul called his grandson Clark, who lived next door, Little Man. Clark recalled:

One of my fondest memories was sharing his snack, his after work snack with him. He'd have a big slice of homemade baked brown bread with about a quarter inch of butter on it and big thick slice of cheese and then he'd have a cup of cold consommé beef broth and we'd sit there. I'd sit on his lap and we'd eat together and chat. It was really warming to be with him. I remember one time walking away from him before he was through talking to me and he was pretty crippled up there at the end and he walked with two canes and took one of his canes and reached out and gently hooked it around my neck and brought me back in. [Laughter.]

"We're not done yet. What are your plans this evening, Little Man?" he asked.

"I'm going to play," I answered.

"Are you going to help anyone?" he inquired. "I'm going to bring Nana her pills and some water and then sit with her. Can I help you right now, Poppy?" I asked.

"You already have. Always remember to help others, Little Man. Now run along."

Clearly helping others was the driving force in his life and a lesson I will never forget.

During the summer and during Christmas, Dr. Paul's other grandchildren visited when his daughter Ethel brought her family back to Utah. His oldest grandchild Kathie remembered that Dr. Paul always gave her a twenty-dollar bill for Christmas:

In those days, that was a lot of money. I mean twenty dollars, that was a lot. I remember him, every year the whole family, when we were home, we would go to Lagoon and we could ride the rides as much as we wanted, which was a big thing in those days. But he would buy us as many tickets on those little kiddie rides as we wanted.

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Richards Memorial Medical Clinic

Now that he was back in Salt Lake City and in practice at a temporary location, Dr. Paul turned to his desire to build a new medical clinic. His plans were ambitious and he could not realize them alone. Dr. Paul's older brother, Willard Brigham Richards, Jr., (the family called him W. B.), was a successful building contractor and entrepreneur. He had been instrumental in the organization of several Sugarhouse businesses including the Granite Drug Store, the Sugarhouse Lumber and Hardware Company, and the Granite Furniture Company. He owned land that had been part of the family farm, a block away from the childhood home of Dr. Paul. Willard agreed to build Dr. Paul's dream clinic on a large parcel of land that already had an apartment building, the Ensign Apartments, on the northern part. The new medical clinic was constructed on the southern part of the property and about six years later the apartment

building was removed. The apartment building included a coal-burning boiler, and being a frugal contractor, Willard had run the heating pipes for the clinic building over to the apartment's boiler room. The boiler was converted to a gas-burning boiler housed in a small, half-subterranean structure, which remained after the apartment building had been demolished, some forty feet northeast of the clinic itself.

162 A short time prior to the construction of the new clinic, Willard fell from a roof and had run "a stake into his head." Dr. Paul was at Willard's bedside as he gradually recovered from the accident. Perhaps Willard was feeling particularly appreciative of modern medicine and Dr. Paul could be very persuasive when inspired by a dream of what could be; even his older brother was not immune to Dr. Paul's enthusiasm. Dr. Paul was a vortex of magnetism, pulling people into his plans and his desires to help his patients and improve health care, and leaving those who could not keep up a bit stunned in his wake. It remains unclear how much of the money for building the clinic came from Willard and how much came from Dr. Paul. The supposition among family members was that Willard contributed more than Dr. Paul.

The two-story red brick building contained 24,280 square feet of space. The setting felt "pastoral" because of a large front lawn and trees that set the clinic back from the road. Parley's Creek ran diagonally across the property and under the building. The banks of the creek were lined with rocks set in mortar to keep it under control. Across the street was the Granite Tabernacle (also known as the LDS Lincoln wardhouse).

This new medical facility was not a hospital, like Dr. Paul had run in Bingham, but instead housed a group practice. As the medical field grew in the twentieth century, doctors became increasingly specialized, and the percentage of doctors who worked as general practitioners had declined. A group practice was a relatively new

concept for delivering medical care to patients, where a variety of specialists shared space and nursing staff, and could provide more complete care for their patients. The original plan was to have nine doctors. This later expanded to fourteen doctors and two dentists. At Dr. Paul's death, the clinic had twenty doctors and two dentists. Dr. Paul said of the clinic: "I have the responsibility of many people in this medical organization, and it is my duty, in my devotion to my work and to the young people that I have induced to come with me, to see that a strong basis is laid. I want to feel that my work has been rounded out so that my endeavors in the medical profession can find the completeness of the purposes for which they were designed."

The two brothers named the clinic the Memorial Medical Clinic, in honor of their grandfather, Willard Richards, and three uncles, Heber John, Joseph S., and Stephen L., all of whom were physicians. Dr. Ralph T. Richards, son of Joseph S. Richards, wrote up the following description of "Four Utah Pioneers of Medicine."

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The father and founder of the Richards family in Utah was Dr. Willard Richards. He, with a body of immigrants, entered the Salt Lake Valley July 22, 1847. The next day they started building dams in the two branches of City Creek to divert the water and soften the ground for the plowing that started at First South and Main Streets.

Dr. Richards was the first "Doctor" in Utah. He was a Thomsonian physician who won his title by paying \$20.00 to Samuel Thomson for the rights to prescribe a patent medicine called the "Conserve of Hollyhocks." He had no time for practicing medicine as he had nine other jobs connected with the church and city administration. He lived in Utah until his death in 1853. As editor of the Deseret News, he wielded a vitriolic pen against doctors who had graduated from regular medical schools. He was voicing the attitude of the church authorities, including Brigham Young, who preached long and loud against employing graduate physicians to attend the Saints.

The transcontinental railroad was completed in May, 1869. Brigham Young saw his pioneer civilization was on the threshold of a new era of modernization. He had a

change of heart toward doctors and financed several young people to go east, attend and graduate from the best of medical schools. Heber John Richards, son of Willard, was the first of these. He won his M.D. from Bellevue Hospital Medical College in 1871. Dr. Joseph S. Richards, Heber's brother, followed in the same school in 1875; but he traveled on his own power — not on church funds. Another brother, Stephen L. Richards, father of Gill, graduated in 1893.

Ralph T. Richards, M.D.

It is to the memory of these four early men of medicine that the Memorial Medical Center is dedicated.

As mentioned before, by this time, Dr. Paul S. Richards was known as Dr. Paul and his daughter answered to Dr. Lenore. Dr. C. David Richards later worked at the clinic, long after Dr. Paul had died, and was called Dr. David.

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The clinic opened on July 1, 1953, and Dr. Paul worked there for the next five years. He had a general practice, including surgery. Many of his patients from Bingham continued to come see him in Sugarhouse. As a versatile practitioner of medicine, Dr. Paul also continued to treat cancer. He did not keep radium at the hospital, but borrowed it from a colleague when needed. His daughter remembered that "He'd plant it and I'd dash it back when he got through with it."

Paul, Jr., wanted to open a pharmacy in the clinic, but his father did not think that was proper, so his son opened his business, Medicine Chest Pharmacy, in 1956, in a building across a small alley from the clinic. Both businesses thrived.

Reminiscences and Introspection

During the summer of 1957, Dr. Paul's health declined as prostate

cancer ate away at him, but he persisted in working at the Memorial Clinic. During his lunch breaks, he went to his old family home, where his sister Joy now lived. He ate lunch and rested in the North Room that he knew so well. His sister Ann also visited during these times and the three siblings often reminisced about their lives. Ann recalled later that she could still hear his contagious laugh and see the wonderful relaxation that came to him.

Recognizing that these memories would soon be lost, Ann started to record the conversations on a tape recorder borrowed from Willard's grandson, David, directing the conversation through leading questions. On some days, Dr. Paul's words came easily, while on other days, he was too sick and "he told us very little and the words came with effort." When Ann later transcribed the recordings, she tried to use his exact words as often as possible. In 1965, Ann finished compiling her brother's reminisces as "The Memoirs of Dr. Paul." Copies were distributed to family members and a copy was donated to the University of Utah Medical School for their library.

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With a couple of exceptions, the stories in Dr. Paul's "Memoirs" ring true. They are verified by other historical sources. One of the charming features of Dr. Paul's "Memoirs" is how often he complimented other people for their abilities and accomplishments. There was also a complete absence of any whining or settling of scores on the part of Dr. Paul in his "Memoirs."

Ann recalled from conversations that were not recorded that he appreciated so much the many times that his wife, family, patients and friends had helped him solve his various problems. Dr. Paul often said, "How one uses his time determines what he becomes in life," and "With sufficient time and effort one can overcome or adjust to practically any difficulty." Ann thought that his life was a living example of this type of thinking.

Trying to establish a recollection of his life was not easy for Dr. Paul,

because bringing forth the past into the present did not make the future look too bright. He felt that there was still so much for him to accomplish. His mother had always assured him that he would live long enough to accomplish the things that his heart honestly desired. This promise was his greatest encouragement because many of the things that he had wanted to accomplish and still desired to do so had not been made clear to others. He felt it was only possible to propose the vision of one's mind to others as he felt their minds were prepared to receive the projection of his thinking. He had concluded that sometimes we destroy friendship when we try to project our thinking to others further than their minds are prepared to digest the things that we present to them.

166 In these moments of emotional stress and strain, Dr. Paul felt that we are confronted with problems that make it difficult for us to establish a proper equilibrium. Our emotions, our desires, our judgments, and our reasons in life are the things that are in constant conflict. And it is by bringing these things into proper balance, in a state of true and justifiable wisdom, that we maintain ourselves so that life develops a suitable pattern by which we progress. This way of thinking about the mind was compatible with the concepts he had learned from his study of Freudian-influenced psychology.

As he rested in the North Room, dictating his memoirs, he felt that there was no spot on earth where tranquility had been achieved more completely than right there. He had always felt, until the last few months, that composure was best obtained out in the open, in the forests or mountains, where things were not contaminated by human environment. But in the North Room he understood the need for human contact, and he felt it everywhere. The room was saturated with human contacts. In his earlier life, the outdoors were a refuge for him to get away from the stress and strain of contacting so many people in his profession. But here he felt he was absorbing a collection of all the humanities that his life had ever encountered, and they were gathered in this spot. Lying there in the calmness of his

own mind, he hoped to plan the future and find the opportunities where the longings of his heart might be accomplished. He knew such a plan would have to come soon, because for the previous six months he had been running with a biological timer inside him controlling his future. He died just two months after having these thoughts.

He wanted to feel that everything that had been done to date, and everything that he might be able to do in the little time allotted him, would form a firm foundation of something that would go on and become an important part of how the medical profession functioned in Utah and the entire Intermountain region. He had great hopes for the medical profession and felt that it would attract many fine minds to follow through on the things that the profession was trying to establish at that point. His desire was that his little Memorial Medical Center would grow into an institution that would carry out all the protective mechanisms for human life that the medical profession could properly administer to humanity.

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Even as he declined into his last days, Dr. Paul's ambitions as a doctor continued to burn in him. Family members and other people in Dr. Paul's life had often thought of him as being very demanding, always pushing them in an effort to get people to keep up with him and his impressive endurance. In reviewing his life, he realized that these other people were right, that he had been a "harsh task master" and "owed many people an apology." His sister observed, however, that he "always demanded more of himself than of anyone else." While true, he left his mark on many people, both for good and to their detriment. He was also concerned about his wife and how to ensure that she would be cared for. Ethel was effectively bedridden by this time and he told Ann that "was so proud of the way" that Ethel "had accepted her illness and the great patience that she had developed and he often wondered if he would have been as brave had he been in her condition."

Therapeutic Thoughts

In May 1928, Dr. Paul made his first transcontinental flight across the United States. The airplane was a Boeing single-motored biplane being used to carry mail across the country. Only one passenger was allowed per trip because of the heavy load of mail. It took twenty-two hours to complete the trip from Salt Lake City to Newark, New Jersey, the landing field for New York City. He arrived at his hotel a little after midnight. En route, his luggage had been lost, and as he disembarked he was somewhat disturbed in his equilibrium. Just as after a long sea voyage a man might have sea-legs, after twenty-two hours in the air, Dr. Paul had air-legs. He felt unsteady in his walking and quite light-headed. He felt restless in a way that he had never experienced before. Having crossed the ocean twice and having experienced some tough storms at sea with no ill effects, this feeling somewhat disturbed and frustrated him.

168 He was very tired and went to his room, undressed, took a hot bath, and went to bed. He tried all the mental tricks he knew to induce sleep but was unsuccessful, so he called the desk clerk and asked him to send up some magazines. The clerk informed Dr. Paul that the newsstand was closed; there was nothing he could send. So Dr. Paul searched around the room and found a Gideon Bible, and for the first time in his life he read the Book of Ruth. He read it and re-read it, and though he could not recall much about the contents, he did find the act of reading a very satisfying experience. It occurred to him that when his patients had restless nights and were apprehensive and their minds were full of anxieties, that a book might calm them and perhaps induce sleep as the Bible had done for him. The next morning he conceived the idea of compiling a little book that a patient could pick up and in a moment could glean a thought that might be conducive to rest and peace of mind. He spent years collecting and writing little sayings that he thought might answer the purpose. In 1935, his book of Therapeutic Thoughts was ready. A volume was placed on each patient's bed stand, and it was very well received. About half of his hospital patients took one home with them, and it did not take long for several hundred

copies to disappear. Dr. Paul always took his little book on trips and kept one by his bed; each night he picked it up and read a few of the little sayings inside and gained as much joy and satisfaction from them as when he was compiling it.

This book fell into the hands of many people, and very often they sent expressions of gratitude for its contents and the philosophy that they had gained from it. Dr. Paul always felt that our philosophies are what make us secure in life. They relieve the jolts and jars and take away our apprehensions, and they lend a tranquility that makes life livable. They help us meet life without rebellion and in a state of acquiescence, so that we can feel that life is grand regardless of the problems and difficulties of this world that beset us from time to time.

An example of the kind of poems and quotes that Dr. Paul liked was selected for a dedication page of his "Memoirs:"

The Salutation of the Dawn

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Listen to the exhortation of the dawn!

Look to this day!

For it is life, the very life of life,

In its brief course lie all the

Varieties and realities of your existence;

The bliss of growth,

The glory of action,

The splendor of beauty.

For yesterday is but a dream,

And tomorrow is only a vision

But today well lived makes

Every yesterday a dream of happiness,

And every tomorrow a vision of hope.

Look well, therefore, to this day!

Such is the Salutation of the Dawn!

—Sanskrit

The Hospital Garden

When he lived in Bingham, Dr. Paul maintained a garden that hung on the steep slopes behind the hospital. He loved his garden, was very proud of it, and did a lot of entertaining in it during the summer. His daughter thought that part of the reason he enjoyed the garden so much was that it reminded him of his days as a youth on his family farm. In his own words, Dr. Paul found gardens enchanting: "Since the beginning of time gardens have been most popular. In fact, the Bible is an accredited history of the beginning of the human race and it started in a garden. You may say it is a basic feature in life." He found the activities involved in keeping a garden most intriguing and most challenging. The topographical features of the rocks in Bingham Canyon, the precipitous walls, and the barrenness of those rocks for lack of soil created difficulties for Dr. Paul. The garden started in a small way with six square feet, where he planted a few flowers. He sprinkled these once or twice a day.

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The garden expanded when Dr. Paul had a veranda built behind the hospital from which a cement stairway of seventy-odd steps led up to various terraces. These terraces were built with considerable difficulty. Workers drilled holes into the barren rocks with an air drill and placed perpendicular steel rods in these holes to the depth of several feet with steel extending several feet into the air. On the back of the protruding rods were placed planks and then soil placed on the planks. In this way Dr. Paul built up about two thousand square feet of soil bearing surface which would support lawn and flowers and in some places substantially-sized evergreen trees.

The placing and the covering of this entire surface with soil was an interesting piece of engineering. Directly above the location Dr. Paul had picked for his garden spot was a large area where scrub oak trees had been growing for years. This area was not quite as steep as the mountain behind the hospital. With the help of several men, Dr. Paul built long chutes on the mountain side (one chute was 800 feet

long). Then they dug soil from the higher hillside and dumped it into the chutes, and it fell into the garden area. By stripping a large surface of the ground above, they obtained a considerable quantity of fine mountain loam. It took a number of years to build this garden, get the lawn to grow, and establish a background of flowers.

Coaxing grass to grow on the slopes between the terraces was an interesting challenge. Many of the slopes were at forty-five to fifty degrees, and everyone, including the experts, said that Dr. Paul would never get a lawn to grow on a slope that steep. Dr. Paul packed the soil firmly, planted the seed, and stretched surgical gauze over the ground; then he placed another layer of gauze that was supported by a frame ten inches above the first layer. The lower gauze supported the soil so it would not wash away and also acted as an emulsifier to keep in the moisture, while the upper gauze broke the force of the spray as he watered the lawn. He had no trouble getting the lawn to grow, and he felt this was a real accomplishment after all the discouraging advice that had been given to him. His next difficulty was in cutting the grass. The slope was so steep that he had to tie a safely anchored rope around his waist and go in with a hand scythe to cut the grass. He did this about once a year when the grass had reached a height of eight to ten inches. The rope was necessary, as he had no other way of hanging on, since every time he turned or made a move it seemed that his feet would slip from under him.

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On the top level Dr. Paul had his barbecue. It was an area forty feet long and twenty-five feet wide. This was built up by cribbing, a framework built over a cement concrete wall that was forty feet high. He often had crowds of thirty to forty people to steak dinners and he thoroughly enjoyed donning white cap and apron and serving the guests himself.

Each night at 9:00, after completing his work at the clinic, he spent two or more hours with his garden. It was filled with flood

lights and he could go out and work all night if he chose. Many times when his life was strewn with problems and weariness and sleep was impossible, he spent the entire night working in the garden. At five, or five-thirty in the morning, he would then return to the hospital and prepare himself for the day's work. The relaxing activity, his peace among the flowers and the beauty of the grounds, made him straight with the world again. Dr. Paul found that his garden labors and interests were one of the greatest balance wheels that he had ever developed, as much a balance wheel for his physical being as Therapeutic Thoughts had been a balance wheel for his mind. After he was gone from Bingham, the cherished book existed in physical form, but the reality of the garden only remained as a picture in his mind. He advised that anyone suffering from mental strain and too little physical exercise could profit by engaging in gardening activities.

172 After Dr. Paul left Bingham in 1948, Dr. Straup took over the garden and carried it on to great recognition. He had spare time and really developed it. One of the representatives of Home Gardens went to Bingham and took a great many pictures of the gardens and they were published in that magazine a few years after Dr. Paul left.

Mother and Humor

Dr. Paul had always been close to his mother, perhaps because he had effectively been the youngest child in the family until he was ten years old, when the first of his two little sisters (the Little Girls) were born. His mother had traveled all the way back to Harvard for his graduation, and after his return to Utah, he regularly visited her until her death in 1952 at the age of ninety-five.

Despite an obvious closeness in their relationship, Dr. Paul always felt that their relationship was not as close as it could be, because his mind was "often directed in channels of freedom from anxiety

and I indulged in a type of thinking which mother called smutty or adverse." Frequently when Dr. Paul told a story, his mother would say, "Paul, your mother is a lady." He thought that in her way she felt that he had a "perverted" mind. This issue existed for many years, until his mother mailed him a post card from California that gave him great satisfaction. On the right-hand side was his address and on the left-hand side was a birthday salutation with a nice little note bringing him greetings on his fortieth birthday. As he turned the card over, he found a sketchy drawing, and he awakened to the fact that his mother had a sense of humor that was just beginning to appear. The picture portrayed a bride raising the mattress with an oil can in her hand and she was oiling the springs. The inscription underneath read, "Silent Night." Dr. Paul remembered the glee that came into his heart as he took the card in his hand and walked through the hospital with shouts of joy because he felt that at last his mother understood him. He displayed it to seventy or eighty persons with the full conviction that his mother had run across something in her life that gave her a spark of the humor that was in her son.

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Dr. Paul's sense of humor served as a mechanism of relief from the stresses and strains of life, and he always said, "Sorrowful is the day when I can't have six or eight good laughs, irrespective of the type of humor involved, in order to get some much needed relaxation." He always contended that there was a certain amount of filth or smut in every mind. To give it vent, to let it bloom out in the open, and to not be ashamed to let any man know that you have such a mechanism within yourself, was very gratifying. Dr. Paul felt that those people who are ashamed to dump out their garbage can, as he called it, were afraid to meet one of the greatest realities in the workings of the human mind. To keep your garbage can clean was an adjunct to good living, and how some people can go around with a pious face and a "holier than thou" attitude was more than he had been able to determine. Keeping the mind free was a means of avoiding malice and contempt and many of the attitudes that grow because we hold

things within ourselves in a cumulative fashion. The effect can often be quite disastrous.

A few weeks after his fortieth birthday, Dr. Paul received another card from his mother, and then he was thoroughly convinced that she understood the little touch or spark that was so invigorating for him. This was the picture of a German Dachshund, who, in walking around a tree, ran into his own rear end, and he sniffed and thrust his nose in the air and said, "Well, I thought I knew every dog in town." This made him feel that his mother knew what was in his mind and that she had developed a tolerance for his humor. For years he was willing to let that little barrier exist between them, but now she seemed to understand that little vent was necessary to keep him in a proper state of equilibrium.

174 In his "Memoirs," Dr. Paul protests his sense of humor too much, defending his need for laughter and taste for bawdy stories. His ideas about psychology and the need to avoid repressing feelings were common for psychology of that time. Dr. Paul used terms from psychoanalysis, such as the words anxiety and stimulus, and the concepts of psychology that he believed in were apparently heavily influenced by Sigmund Freud. Dr. Paul also developed a personal saying, which he made into a sign for his office, "The Flexibility of your Adaptability is the true measure of your Intelligence." He thought of this saying as his only contribution to philosophy and also thought that his mother's inability to be flexible enough to understand his reaction to humor for so many years cast an interesting light on his personal saying. In other words, he felt that the measure of a person's intelligence was a reflection of how flexible a person is in their thinking, as opposed to being rigid in their thoughts.

Dr. Paul was famous for his booming and boisterous laugh that could be heard throughout the whole clinic. That he found off-color jokes amusing should not be surprising, though what constituted

an off-color joke during his life was considerably different than contemporary standards. Paul, Jr., also inherited this tendency towards a bawdy sense of humor.

Dr. Paul's sense of humor was also apparent in an unusual personal grooming choice. While at Harvard, he sported a full mustache, but photographs show that in the 1930s and perhaps in the 1940s, Dr. Paul favored a small mustache confined to the upper lip below his nose. In a newspaper photograph from 1948 he has the small mustache, though it could be an old picture. This style would probably have been called a "Charlie Chaplin" or "Little Tramp" mustache, since it was a trademark of the famous character by the comedic actor. It later fell out of favor as Adolf Hitler came to power in Germany in 1933 and his face and his mustache became well-known around the world. It seems that keeping the small mustache was Dr. Paul's own little joke.

Dr. Paul's nephew Henry Richards thought that his Uncle Paul "walked on water." He made sure that all four of his children were delivered by Dr. Paul, even though that required that he drive his wife over to the Bingham Hospital, rather than use more local resources. One of those children, Charles David Richards (known as C. David), later followed in the Richards tradition and became a surgeon. C. David remembers visiting Dr. Paul at the Memorial Clinic for a physical when he was a fifteen years old. A blood test showed that the teenager was anemic. C. David did not know what the word meant, so asked his great uncle, "What does that mean that I'm anemic?" Dr. Paul responded, "In the lab, it means you have blood like a girl," then he laughed.

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Dr. Paul's Father

One day in the spring of 1929, when Dr. Paul's father was eighty-two years old, he came out to visit his son at the Bingham Hospital. His

vision was very poor and he could no longer read or see well enough to do any kind of work, and he had only four or five teeth left. Things looked quite dark to him. Dr. Paul supposed that the world would have looked black to him also had he been in the same circumstances. This particular day, his father asked, "My boy, I want you to pull the few teeth that I have left." Dr. Paul gave him a local anesthetic, which his father did not want, and proceeded with the extraction.

Years before, his father, a practical dentist, had taught Dr. Paul to pull teeth, and at that time they did not anaesthetize. Watching his father was Dr. Paul's early education in pulling teeth. His father was very apt at it and he taught Dr. Paul many of the fine little tricks to loosen the tooth, and how to stress and strain and use rotary and lifting movements to extract a tooth without causing a fracture.

176 Dr. Paul pulled his father's last teeth, and after the pulling bee was over, he said, "My boy, that didn't hurt one particle and I am glad you pulled them for me. You did a good job and I feel fine, only I'm getting tired of living. I can't read and I can't see to work and I can't chew. There isn't anything that I can do any more, and not being able to produce makes me feel so worthless."

Dr. Paul never forgot the harsh words that he spoke to his father then. "Well, Father, I never dreamed you'd turn out to be a coward. Your family apparently has been a disappointment to you. Now that you cannot do anything, you want to pick up and leave us. Where has ever a family sought counsel as your family has sought it from you? What father has ever maintained the continuity of the confidence of his children more than you have done practically every day of your life? What have any of us ever done that we have not come to you and opened up our hearts and asked for your advice before we have proceeded with any of our ventures? And now you say you have nothing to live for. Don't you think this is rather a poor concept of things? I say again, this is a cowardly outlook on life. If you could take your four sons and five daughters into your confidence and live their

lives with them and see the many things they are accomplishing and the children they are bringing into the world — which is essentially a continuity of your life — you should feel that life is worthwhile. When you see the homes they are building, the reputations they are establishing, you have the life of a small multitude to live for, Father. All your children are actively engaged in things that are thrifty. You haven't a child that hasn't done something that is fine and of real magnitude in life; and see how many children have come forth from this family of yours. It seems to me that right in the full bloom of your life, you want to leave us. What nonsense for a man to want to desert a family as large as yours, with all the wonderful things they are accomplishing! Why can't you lay claim to these things? You and mother are the ones who made it possible for all this to come about. I think you need to be impregnated with a stimulus and a motive to go on. You need courage, faith and confidence that life is fine and glorious because all these things are being accomplished."

The lecture of the father by the son worked. From that time on, Dr. Paul's father seemed to have a different attitude. He came to Bingham quite frequently to visit Dr. Paul. Often he would arrive in the morning and stay all day. He loved to be with Dr. Paul and go from room to room as the doctor visited his patients. Dr. Paul loved to have him there, because it seemed that this was a source of happiness in his father's life, something he had been missing. Dr. Paul always looked back on this one incident, feeling that it had initiated a new attitude in his father's life that he had not been able to find on his own. This new attitude was very gratifying to Dr. Paul, and it made the father and son very close in companionship during the last ten to fifteen years that his father lived. His parents were always an important presence in Dr. Paul's life, and this extra closeness was very dear to him. It was only in his later years that Dr. Paul felt that he had attained that closeness.

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Willard Brigham Richards, Jr., Dr. Paul's father, lived until 1942, dying at the age of ninety-five. When he was born on January 25,

1847, in Winter Quarters, the Latter-day Saints were still preparing to cross the plains and settle in Utah. Railroads, still in their infancy, were the fastest way to travel; electricity was a curiosity; medical operations were performed without anesthesia; and the germ theory to explain disease had not yet been developed. The first operating telegraph line was only three years old. When he died, jet airplanes were the fastest mode of travel yet invented, automobiles had transformed the American landscape, and electrical power was common in both urban and rural areas in America. He could have made a telephone call to anywhere in the developed world, his voice converted to electrical impulses traveling over landlines and through cables under the oceans. Radio was common and television had been invented, but not widely deployed. Willard had been born fourteen years before the American Civil War and died six months after the Japanese attack on Pearl Harbor brought America into World War II.

Family

Life in Bingham was pleasant for Dr. Paul, where he was a valued leader in the community and enjoyed the adoration of so many people. For a man who had suffered from self-esteem issues, this was the sweetest reward. His relationship with his wife declined as her health issues developed and she struggled with being overweight and with the onset of Parkinson's disease. As tensions increased at home, it was easy for Dr. Paul to lose himself in his medical practice and the community. His children experienced their father as the dominant presence in their lives, but a man who they did not see much.

The size of community made it easy for Dr. Paul and his family to adapt to the situation. The children grew up in this friendly area and obtained their primary and high school education there. Because as many as twenty or thirty different nationalities attended school at the same time, this gave the children a very liberal and broad concept

of various types of people. Those of high and lowly means mingled together freely and social functions were very cosmopolitan. The executive and administrative groups in the mines were of high-caliber people who came from all parts of the country. College graduates abounded in the community, and Dr. Paul thought that the parties, both private and public, were of a very high type. After moving from Bingham, the family still attended a New Year's Eve party with a little group that originated in Bingham. They had been together for thirty years, and Dr. Paul noted that he had never seen so much as one member take a drink of liquor. He could not say this for all the parties, because at times liquor flowed quite freely, but the people were always sensible and knew how to handle this phase of sociability. It was practically never abused.

Dr. Paul felt it was a great privilege to raise his children in this type of background. They had the opportunity of meeting all kinds of people. They followed their father to many places where he went and they saw the bootleg joints, the moonshine joints, gambling dens, and honkytonks, in their very youthful years. This experience came in advance of their inquisitive period so that life sort of unraveled itself to them like a panorama, with no excesses or indulgences. He felt this prepared them to meet practically any and every situation in life on a very sensible and stable basis.

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Dr. Paul thought that possibly Lenore profited more than the others from her background in Bingham, as she is the one who traveled most in later life. In her profession as a doctor, she was able to utilize both her understanding of human nature and her understanding of the variety of different ethnic groups in the community, which helped her and others adjust to the great problems of life.

All three children were vigorous, enthusiastic, and energetic, with three very different and distinctive personalities. Dr. Paul believed that they always appreciated their environment and were very faithful

to their mother, especially in the later years when she was so ill and confined to bed. Dr. Paul had never seen such devotion in children in all his experience. They had taken many responsibilities that would have logically fallen on Dr. Paul and were faithful in those responsibilities every single day. Their vigilance and trustworthiness serve as a testament to the splendid teachings and training that their mother gave them.

Ethel played a great part in adjusting herself and the children to the type of life the family led in Bingham. She was most devoted to her family and insisted that each Saturday the children spend the entire day in Salt Lake in educational pursuits of various types. They had lessons in dancing, piano, public speaking, and drama, and they learned all the various handicrafts that she could find for them to do. With this background, they took part in all the school, church, and social activities in Bingham.

180 As he reminisced, Dr. Paul gave all the credit to his wife for seeing that every opportunity was provided for the children so that their lives might be well-rounded. He was sure that the children were most grateful for all the opportunities. Dr. Paul believed that as they viewed their present positions and contemplated their own futures, they must give their mother credit for the persistence, diligence, and tenacity that she established in them.

Ethel's loyalty in pursuit of opportunities for her family was characteristic of her general personality. Outside of Bingham, she acquired a host of friends. These friendships endured, and to her friends she showed the greatest type of loyalty. The children all graduated from Bingham High School and later from the University of Utah. Lenore became interested in dramatics in her freshman year, and her teacher, Maude May Babcock, told Dr. Paul on several occasions that Lenore was one of the few students she had ever had who made the University Dramatic team five years in succession.

Dr. Lenore was extremely diligent and very devoted to her patients. She was always very respectful to each and every individual who came under her care regardless of race, color, or creed. When Dr. Paul visited her in Cincinnati, he felt pride and respect as they made her ward rounds. He was confident that she gave the minority patients just as much care as she did the whites in the Cincinnati General Hospital, and in numbers they were about equal.

Social standing and respect that came from merit mattered very much to Dr. Paul. He reflected this in his appreciation of his oldest child. For the last seven years of his life, Dr. Paul and Dr. Lenore worked in a full partnership. He found her to be very much like himself: a diligent doctor who carried out a very methodical routine in her work. She treated her father with the highest respect, and he was sure that she appreciated his judgment as she consulted with him frequently in all of her difficult problems. Dr. Paul greatly appreciated her consideration of him in their work and their father-daughter relationship.

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Dr. Paul valued Dr. Lenore highly and respected her as one of the best surgeons with whom he had ever been associated. Dr. Paul thought she had a technique and touch with a characteristic delicacy that only a woman could possess. She was a splendid diagnostician and was devoted most sincerely to her work and held the respect of all those who come under her care. She built up a large practice, and Dr. Paul said that he had never referred a patient to her who had not been entirely satisfied with the work she did. He thought her patients learned to love her very much. She stood high in her profession and was respected by all the doctors in the clinic as well as by the staff at the hospital. In 1953, Dr. Lenore became a member of the American College of Surgeons, just as her father had, and Dr. Paul felt great pride when the United Press photographed the two of them in recognition of that accomplishment. He was most thrilled with the success she had earned and thought she was an ideal colleague.

One of Dr. Lenore's cases that particularly intrigued Dr. Paul began when a woman named Jean Margetts went on a short trip with her fiancé in 1956. Their wedding was to take place in the near future. On their return to Salt Lake Valley, they both fell asleep as they came over the summit at the head of Parley's Canyon. Their car went out of control and plunged over a steep embankment, overturned several times, and landed in a deep gulch several hundred feet below the highway. The man regained consciousness sufficiently to free himself, but died in an attempt to reach the highway. Jean was pinned under the car, but with no severe pressure that would cause impairment of circulation, and she was fairly well protected from direct exposure to the sun's rays. The days were very warm and the nights were freezing. The girl was asleep when the accident occurred and was rendered unconscious by the impact. She lay under the car for a period of nine full days and was found in an unconscious condition at the end of that period. To our knowledge, this is the one of the longest periods a person has ever gone without food or water and been subjected to this type of exposure, yet still lived. She was removed from the site of the accident and taken to LDS Hospital in Salt Lake City, where doctors found multiple fractures and determined that she was in a general physiological state of imbalance.

Through careful study of her body chemistry and proper support with fluids, serum, albumins, and mineral balance, the patient gradually recovered her normal health. This case received great publicity and world-wide broadcasts. She had about as much publicity as the snowslide victims and the bus accident students mentioned earlier. Dr. Lenore and Dr. Donald E. Smith, a specialist in internal medicine at the Medical Memorial Center, attended this case, and their help was invaluable.

Dr. Lenore lived with her parents in their half of the family duplex. After her father's death, she remained there, and after her mother's death in 1967, she still remained. She lived in that home for the rest of her life.

As soon as Dr. Paul's youngest daughter, Ethel, graduated from the University of Utah, she came to work for her father at the hospital in Bingham. She married Alvin W. Baker on June 4, 1946, and accompanied him to Cambridge, Massachusetts, where he obtained his doctorate in spectroscopic chemistry. He graduated with high honors.

Dr. Paul thought that Ethel was a most inspiring little soul and described her as having a heart as soft and tender as one could possibly possess. She was lovable, cheerful, happy, and a source of motivation to all who associated with her. Dr. Paul thought that Alvin was a splendid husband and he and Ethel made a lovely couple. Their four children — two girls, Kathie and Susan, and two boys, Paul and Braddock — delighted Dr. Paul. The girls were very active and diligent in their school work and the parents were extremely interested and give them a great deal of assistance. According to Dr. Paul, the boys were active little fellows and all together they made a very happy family and had a splendid intellectual circle among themselves.

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Dr. Paul always appreciated going to their home and they seemed to enjoy having him there. They were all interested in his welfare and displayed to him a love that was gentle and congenial. Their home depicted Ethel's spirit, as she transmitted her softness, gentleness, and kindness to all the members of her family. She was a wonderful mother, demonstrating all the love and affection that one can display. If a man has what might be called a bouquet of life, Dr. Paul thought that his daughter was certainly an outstanding flower in his bouquet, and he had always depicted her as such. He thought that she had a great future in instilling her attitudes and her choice characteristics into her offspring and all with whom she came in contact. She was very stimulating to Alvin, who had one of the most intellectual minds Dr. Paul had ever met. Ethel was an inspiration in her father's life because she had given so much in return for the little things he had done for her. Dr. Paul was always prayerful that she would be able to make her life felt to the fullest in her children. The world had too few people like her and he was sure that she had a great mission to

perform in this life.

The youngest of the children was Paul, Jr. He was always a very happy child and got along nicely with others. After graduating from the University of Utah, he completed two years of medicine but decided he was not fitted to be a doctor. His father thought that when his son entered hospital work, the emotional strains were such that he was unable to stand them. Dr. Paul recalled, "even today when he takes care of his mother, it is very difficult for him to give her a hypo."

184 After Paul, Jr., opened his own pharmacy, he decided to return to the University of Utah to obtain a degree in pharmacy. After being out of school for nearly ten years, he found it quite difficult to get back into the swing of studying again. Dr. Paul recalled when his son came to him and said, "Well, Daddy, I can come to you proud to say that I just received a report from all my classes and find I am head of my class." This thrilled Dr. Paul because his son had never been too energetic in his schoolwork. His son recited this little incident with a great deal of pride and Dr. Paul felt very keenly his position and responded wholeheartedly to him. Dr. Paul thought that once his son got his feet entirely on the ground and felt secure, he would be very successful, as he had a wonderful personality and was very diplomatic. He had two lovely children — Paula and Clark. Two years after his father died, Paul, Jr., graduated in June 1960 with a bachelor's degree in pharmacy.

Paul, Jr., and his family lived in one side of the family duplex while Dr. Paul lived on the other side with his wife and his daughter Dr. Lenore. The reason for this arrangement was to have lots of family around to help take care of bedridden Ethel. Dr. Paul enjoyed the closeness of the family association. Lola Jean, Paul, Jr.'s, wife, was very helpful in taking care of Ethel Mother and appreciated this very much. Paula and Clark were also greatly interested in their Grandmother Ethel and visited her frequently. Dr. Paul said they

were solicitous of her welfare and waited on her with the greatest of care many times a day. Clark would run in from his play and say, "Nana, what can I get you? Can I bring you your pill? Can I get you a drink of water? What can I do for you?" He was a most stimulating little fellow and was a great companion to his Aunt Nory, as he called Dr. Lenore. Dr. Paul was proud of them, believing that they were a happy and congenial little family and got along very nicely.

Dr. Paul also felt that great credit was due Dr. Lenore for her attitude toward the grandchildren. Every summer she took the three oldest, who were girls, on a vacation. Dr. Lenore spent from two to ten days with these children and gave them a very diverse introduction to life. They all loved her dearly and Dr. Paul hoped that his two other children would always give Dr. Lenore credit for the strict discipline which she demanded of the grandchildren. Dr. Lenore held their attention and she earned their love. It was a mutual love that he thought was seldom seen. Dr. Paul felt that Dr. Lenore was and would always be a most amalgamating influence in the family.

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As the three other grandchildren, all boys, grew older, they joined Dr. Lenore's annual excursions. The 1959 excursion was planned for February, when the families would meet at Disneyland. Dr. Paul was looking forward to this two-day vacation with Dr. Lenore and all six grandchildren, but he died before this planned vacation happened.

Mortality

The cancer of the skin on his hands in 1948 had changed Dr. Paul and encouraged him to think about his own life and what it meant. In 1953, Dr. Paul contracted prostate cancer, which reminded him again of his mortality. Unlike his parents, who each lived well into their tenth decades, Dr. Paul would not make it past his seventh decade, but the experiences of life and his own introspection had made him a wise man. Part of that wisdom included spending time

with his family, though he did this on his own terms, rather than their terms.

In the early part of June 1957, Dr. Paul took his son, Paul., Jr., to Yellowstone. The father and son were gone two days and had a most delightful time. At Old Faithful Inn they relaxed and had a period of complete rest. While they were there, it snowed. When they left this area, there were three or four inches of snow on the ground, but as they climbed the Continental Divide, the snow became deeper and deeper until by the time they passed over the top, there were eight inches of snow. This was the first time Dr. Paul had ever seen the park in what he called its "celestial robes," and how wonderful he thought it was, and how magical everything appeared to be. The trees were most vivid in their new costumes, and the animals seemed to be especially invigorated. The two men found the animals very keen, alert, and active as they drove along.

186 Dr. Paul felt especially fortunate in having already experienced mountain travel over snowy roads. Bingham had afforded him that practice. Most of the other cars on the road were unable to make the grades, but Dr. Paul's car performed nicely and they had no trouble. That day the two men traversed the greater part of the park and drove out the south entrance into Moran. They visited the Jackson Lake Lodge, which was built by the John D. Rockefeller interests, and spent some time there viewing the Grand Tetons. Those sharp mountains had always been an inspiration to Dr. Paul. Their route home was down the south fork of the Snake River into Afton, Wyoming, and down to Cokeville, where they visited a few hours with Afton and Raymond Peterson, and then on into Salt Lake City.

Dr. Paul said these were two of the most delightful days of his whole life and he believed the only trip that he and his son ever made entirely by themselves, except for the numerous trips to Mountain City, when the son accompanied his father on weekend inspections to the mine.

Another trip that Dr. Paul made in 1957 happened in October, when his brother Willard (W. B.) and he went out the day after Willard's birthday, October 4. They drove north, and as they came down into Cache Valley, Willard suggested that they go into Mendon. They spent two hours driving around and orienting themselves to the old homes, the public square, the farms, and various places that neither of them had seen for a great many years. They visited their father's old home, Aunt Ann Whitney's old home, Uncle Will Longstroth's old home, and several other places of interest. They also went out to their father's old farm where Willard as a young man had spent several years raising wheat and grains of various types. They located the old spring and talked about the old one-room dugout that Willard established so long ago. It was gone but memories of it came very vividly to Dr. Paul's mind, for as a small boy he had spent a week or more on the ranch with Willard, with the dugout as their home.

This was a most enjoyable trip in bringing back into their memories the bygone days of the old home that their father had established when he first married. This was also the place where their mothers, Annie and Louie, had enjoyed a close friendship with each other. Louie taught school in Wellsville and used to spend weekends with Annie in Mendon, just a few miles away.

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The two brothers continued their trip into Yellowstone and spent the first night at the Stage Coach Inn. They made an early start the next morning and spent the day driving through the park. This trip was also in the snow, and it made Dr. Paul happy because Willard had never seen the park entirely in white, and the numerous animals again were very interesting and alert.

Their second night was spent at the Worth Hotel in Jackson, Wyoming. The two brothers visited with each other, relaxed, and rested. Willard was delighted in getting Dr. Paul to actually stay in bed for ten whole hours to rest. Dr. Paul admitted that he had been really tired when they started out on that trip. On the next day they drove

down the south fork of the Snake River, and as they came up over the divide from Bear Lake into Logan Canyon, they renewed their impressions of that lake. Dr. Paul knew of no body of water in the entire world that had a greater reflecting ability. The shades of blue and green were unparalleled in any other body of water he had ever seen. He felt that those who have never paused on the mountainside at a high elevation to see the grandeur of this lake have missed a great deal and certainly any Utahn who has not acquainted himself with the unique artistic potentialities of Bear Lake should do so.

Willard and Dr. Paul were gone three days, and it was a most delightful vacation. Dr. Paul believed that this is the only time that the two of them had gone off on a real rest or pleasure trip with nothing to do but enjoy each other's company.

Dr. Paul's Philosophy

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As he reminisced about his life, Dr. Paul realized that his life's story was an inspirational tale of him facing substantial personal difficulties in his quest to become a useful person. In his early youth he suffered from his poor health caused by rheumatic fever and its complications. The terrible inferiority complex that came from not being able to attend school and keep up with other boys his own age was with him for many years. His stammering made it hard for him to express himself. Fears of failure and the feeling that he would not live long enough to accomplish the things he wanted to do in life haunted him. Over the course of time, he overcame these problems.

The years of his greatest productivity were wonderful years. Then in 1948, when his hands became bad, he faced the emotional and physical strain of cancer. He felt that it was not difficult at all to adjust to the idea of disability long enough to overcome his trouble because it was a trial of a limited duration. Up until this time he felt that his problems had all been successfully met, and when two

years passed after the first operation for cancer with no signs of recurrence, he felt he was on the way to a new life.

His philosophy had always been that life was found in each day and in each hour which that we live, and we should make life as full as possible. He never wanted to relive any part of his life; life is what lies ahead of us, and the objectives and accomplishments of the past are only a foundation for the future and that which can still be accomplished. In 1953, Dr. Paul again faced cancer—this time of the prostate. His last disease was always under control, but he never knew when it would break out actively again. Dr. Paul surmised that for the individual who has never faced the cumulative problems of life, which we know have a time factor, it may be hard to realize the exaggerated uncertainty that comes from within.

As Dr. Paul articulated his personal philosophy of life in his conversations with his sisters in 1957 and 1958, he had already faced his prostate cancer for four years and he thought that it was a situation that no one could understand until he faced it himself. He viewed his situation as a wonderful problem for schooling his mind, training his emotions, and planning his future, all to make the life that remained as fully comprehensive and productive as possible. It gave him the desire to make every hour of the day as worthwhile as he could possibly make it, and to crowd in as much as was humanly possible. It gave him a better understanding of the feelings of others who also faced this problem. He knew that it had given him far greater understanding in his practice of medicine. It also gave him a specific example to bring to his patients who had great apprehensions about the loads they had to carry. Frequently he would say, "Could I, just for one moment, present to you a little problem of mine? Consider it and embrace it from the point of view that it is your own problem, and see how you would handle it." As he presented it to them, letting them know the privacy of his own thoughts, they would say, "Well, we don't quite understand how you can carry your own load and our loads and be as happy and cheerful as you are."

All Dr. Paul could say was that he felt that these challenges were a test to which people are put, an attitude very common among Latter-day Saints. It is a determining factor to see the quality of our make-up. He was convinced that we are all made out of the same material but certainly not out of the same quality of material. These types of situations are like the "cards of life" as they are shuffled to us. It is merely a fateful card that happens to fall to an individual, just to see how he or she will handle the situation. Will the problem be greater than he or she can manage, or will he or she handle it wisely and prudently? Dr. Paul felt that it is very necessary to have patience, endurance, faith, confidence, and a determination to carry any load that life places upon us, when it is placed there under the logical burden as one of the responsibilities of living.

190 Dr. Paul felt that cancer was one of the great unknowns, but when it is thrown at us and we receive it as a reality, it becomes a great known and is really something to struggle with. It is a time when you look in the mirror at yourself and analyze the opportunities that are ahead. You analyze your physical make-up, your physiological processes, and your own psychological processes and say, "Do I have it within my soul to keep all these factors in proper balance and equilibrium, and to go along as a normal individual and do my job in an honorable way?"

One of the most important things that came to Dr. Paul in this trying time was his desire and willingness to pray, to pray with the faith and confidence that he would get an answer. He knew that his prayers had been answered and that he would be endowed with strength, courage, and determination not only to face his own problems but also to help face the problems of his patients. Because of his greater understanding, his ability to assist his fellowmen had been increased. He had no malice in his heart to any degree over this problem. He considered it just as much a reality of life as the sun that shined or the trees that grew. He said there may be a lot of ugliness in this type of situation, but there is also beauty in it when you have the power to

bring cheer and comfort to the people with whom you associate. The individual must not allow it to subdue and submerge him into a type of malice and vindictiveness that would inhibit his useful activities and make him a burden to himself and those around him.

Dr. Paul thought, without the shadow of a doubt, that he knew little about prayer or its real purposes until this problem faced him. It brought him closer to the reality of life than any other one thing. It also brought him back close to his mother. Before she died on January 26, 1952, she frequently came to Dr. Paul to encourage him and let him know that he was doing the right thing. She came back to him with the same fortitude with which she always came to him when he experienced problems earlier in his life. He could never forget his mother's parting words when he left her on the night of December 6, 1948, as he headed for New York to undergo surgery on his hands. Dr. Paul told her there was a long period of disability ahead of him. She looked at her son and said, "Well, son, remember your Mother will be waiting for you when you come back. And one thing further — I want you to remember this because it comes from my heart: you may not be able to see it now, but some day you will see that this is one of the greatest things that has ever happened to you."

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He definitely remembered his retort to those remarks. He said, "Mother, possibly I am stupid, possibly I am far beyond the point of comprehending, but at this time, I do not understand your point of view. I only hope, if that is your conviction, that someday I will be able to see it." Within certain realms, Dr. Paul now understood his illness from his mother's viewpoint. It changed his life and his place of activity. It was the determining factor that took him away from the place where he had practiced medicine for twenty-six years, and it definitely put him in a position where he had to make a new start in life. All his plans and procedures had to be reformulated. If this laid the background in which the final plans for the Memorial Medical Center were founded, then he could say that it had been beneficial, irrespective of the great adjustments it had demanded of him.

Dr. Paul believed that establishing the Memorial Medical Center had been the greatest accomplishment of his life. It was a great responsibility to try to direct the young doctors into a more comprehensive understanding of life and to make them see the importance of their profession with its obligations and responsibilities. It took extreme dedication to make the medical profession the greatest thing that can come into one's life. To Dr. Paul, the opportunity of doing for myriads of people things that they cannot do for themselves, was the greatest responsibility that could befall any man. The individual then becomes the guardian, or parent, of not just a few, but thousands of people. In his way of thinking, Dr. Paul became a parent over all those people who came to him for help, and he had often voiced that thought to them.

192 This declaration of his personal philosophy was the closest that Dr. Paul ever came to a testimonial of his religious faith. Though he had been raised as a Latter-day Saint, and served a mission, and married his wife in a temple ceremony, Dr. Paul found his religion in living his life in service as a doctor. Later in life, he rarely attended church, though he participated in church rituals, such as baptizing his children and ordaining his son to the priesthood. His wife and daughter, Dr. Lenore, remained active in their church activities, including paying tithing. Dr. Paul's lack of attending church distressed his mother, but at the end of her life she told him that she thought that he was "the most religious one of my children." At death, in accordance with LDS tradition, Dr. Paul was buried in his temple robes.

The Old Home and His Sister Joy

For Dr. Paul the things most certain in life were that we live and that we have problems to meet and difficulties to overcome. We must learn to bring ourselves as agreeably as possible into a state of equilibrium with all of difficulties that confront us. Without a doubt the health

problem of prostate cancer, with the complications that arose from illness, had been one of the most serious challenges of Dr. Paul's life. Several times he underwent surgery. He found it hard to adjust himself to those unfriendly conditions, because of the hazards they carry and the emotional disturbances that accompany them. It was a real task to make friends with such conditions. He was not able to say that he made friends with the cancer or that he made make friends with the pain, yet they were in his life and he strove to correctly recognize the mental and emotional processes within himself and accept them. Despite the pain and sickness, he was determined to carry on the pursuit to which he had dedicated his life, and that was to help those who cannot help themselves. He found this to be a challenge of great proportions, but it seemed that with each difficulty, something entered into his life as a compensating factor and as a rehabilitating force.

During his final period of being curtailed physically and mentally, as the prostate cancer wore him down, he went to the old home, the place of his birth, and his early existence, where his sister Joy now lived. Each day he came into this sanctuary, where he found the motivation and drive to emerge out of the darkness, so to speak, and to perceive the opportunities of the continuity of life, which is based upon faith, confidence, and determination. His own great desire was to continue to maintain his professional relationships with his patients and to care for them as one huge family. The home gave him the same setting in which he faced and overcame the problems of his earlier life. To come back here and to find the willingness of a spirit he had always known in connection with the old home was a great joy and comfort to him.

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Joy opened up her heart and home to Dr. Paul to such an extent that he felt as wanted and welcome as in the days of his youth. Dr. Paul found her unceasing in her endeavors to make the old home a place of welcome for her brother and to establish in it the atmosphere that they had in their childhood. Joy made the home attractive and fixed

up the old North Room for Dr. Paul. He thought that she always provided him with every convenience that he could desire and her lunches were wonderful. After lunch, Dr. Paul lay in his bed and looked at the pictures of their parents, his Grandma and Grandpa Doremus, of Aunt Annie, and of his brothers and sisters and some of his cousins. The pictures brought back many happy memories. He could also see the old fireplace with the old irons around it, the old coal bucket, the old blower, and the old furniture that had been there for several score years. The fireplace had a gas log, and Dr. Paul thought that the fire burned with nearly as much expression as did the coal fire in the days of yore. This was a most wonderful spot for him.

194 He felt a terrific indebtedness to Joy and he hoped she could feel the deep gratitude of his heart, as he had no other way of offering her recompense. He hoped she would appreciate what those visits had done for him because of his ability to continue what he loved most in life — his work as a doctor. He wanted her to know, and he wanted the whole family to know, what the environment of the old home and Joy's devotion, which was one of the greatest he had ever known, meant to him. He appreciated these from the depths of his heart and it transformed the old home into a place of sacredness for him. It was a great blessing to be able to come home from his work at the clinic each day and have a few hours in the old North Room where he was born, where he struggled for over three years to prepare himself intellectually for the task of entering Harvard Medical School, and where he endured much of his illness in childhood. He told Joy that if he did not die on the job, he hoped to die right there in that room.

Death and Remembering

Paul S. Richards died at the Memorial Medical Clinic on the morning of November 20, 1958, five days short of his sixty-sixth birthday. The last few days of his life had been spent at that clinic, including sleeping there. At other times he went over to his nearby

childhood home, where his sister Joy lived, and took a nap there. His grandson thought later that it “was like going home to die.” Dr. Paul’s desire to die on the job had been fulfilled.

Two days before he died, his favorite nephew, Henry W. Richards (who Dr. Paul called Hen), came to see him. Henry was the manager of the Granite Furniture Company and his own son, C. David Richards, inspired in part by Dr. Paul’s example, later became a medical doctor and surgeon, and a partner with Dr. Lenore in the Memorial Medical Clinic. As they said their goodbyes for what they expected to be the last time, Dr. Paul said to him, “My heart is right.”

The funeral for Dr. Paul, held in the Granite Tabernacle across the street from the Memorial Clinic, was recorded and transcribed for posterity. According to the Salt Lake Tribune, “Approximately 1,000 persons, including many former patients from Bingham,” attended. The eighteen honorary pallbearers at Dr. Paul’s funeral were all of the medical doctors associated with the Memorial Clinic, aside from Dr. Lenore.

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President Stephen L. Richards, a cousin, and First Counselor in the First Presidency of the LDS church, attended. Eulogies were given by Otto Wiesley (read on his behalf by Oscar Glaeser), Chairman of the Utah State Industrial Commission and collaborator on state initiatives to help injured workers; Oscar Glaeser, his longtime collaborator in industrial hygiene efforts, both at Bingham Canyon and on the state level; Dr. Louis E. Viko, longtime colleague and collaborator on state efforts for legislation; Reed H. Beckstead, superintendent of the Jordan School District and president of the LDS Midvale Stake; and his nephew Henry W. Richards. Other than the prayers and dedication of the grave, the only family member to speak was Henry. The selection of speakers was clearly picked by Dr. Paul and emphasized his professional accomplishments in the areas of worker safety, industrial medicine, and the rehabilitation of injured workers.

An editorial in the Deseret News offered condolences on his passing:

As one of the foremost representatives of Utah's "first family of medicine," Dr. Paul was a gentle but irresistible influence in the maintenance of mutual respect and deep affection between medical men and patients, between doctors and public agencies and private companies, between philanthropists and beneficiaries.

Years later, Dr. Paul's grandson remembered his grandfather as an oversized presence in his life:

Just the sheer magnitude of his personality. He had just a ton of charisma. When he was in a facility, in a room, in a building, in a house, everybody knew it. He commanded respect, he commanded attention, and I remember that. The tone changed when Poppy was home.

His grandson also thought that Dr. Paul inspired people around him in a way that might be called "the Paul S. Richards movement." Dr. Paul "wanted to accomplish great things" and "he felt that he had an incredible responsibility." As he grew in confidence, Dr. Paul "fully discovered his own personal power, his own ability to persuade and inspire with others and he used it."

That's how he practiced medicine. Hell, he willed people better. He told you to get better, goddamn it! [Laughter] You know, that's how both he and Lenore practiced, they had that incredible bedside manner. They did as much with their charisma as they did with their scalpels. I guarantee it.

The superintendent of the Jordan School District expressed a similar sentiment, believing that Dr. Paul's "dynamic personality and personal philosophy of life . . . were important forces which contributed to his success. They were of therapeutic value to his patients."

Dr. Paul would have been proud of Dr. Lenore's accomplishments after his death. In 1972, the Medical College of Pennsylvania named her "Outstanding Female Doctor of the Year." In 1983, the Utah

Medical Association named her "Utah Doctor of the Year." In 1988-1989, she served as Honorary President of the Utah Medical Hospital Association. Other awards also accumulated from a lifetime of service and practice. In addition to being house staff at LDS Hospital, she also had privileges at Primary Children's Hospital and Holy Cross Hospital. She retired in 1983 at age sixty-five after thirty-three years of private practice. She died in 2000. Her brother, Paul, Jr., died from a heart attack at the age of 42 in 1968 while snowmobiling with Dr. Lenore in the Uintah Mountains. Her younger sister Ethel had died in 1989.



Chapter V

THE LEGACY OF DR. PAUL

The Richards Memorial Medical Foundation

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In the last months of his life, Dr. Paul worked to create the Richards Memorial Medical Foundation, a charitable foundation dedicated research and to promoting "all fields and branches of the science and practice of medicine," including "industrial medicine" and "the prevention and treatment of industrial diseases and injuries and the practice of industrial medicine." The far-reaching goals of the foundation included not only supporting research and innovative methods of more effectively delivering healthcare, but also supporting medical education and training, assisting the needy in obtaining appropriate healthcare, and "educating the general public in the prevention and care of disease and in personal care and health generally." Dr. Paul named the foundation in honor and in memory of the same four pioneers of medicine in Utah who the medical clinic had been named after: his grandfather, Dr. Willard Richards, and Willard's three physician sons, Heber John, Joseph S. and Stephen L. On a Sunday, November 16, 1958, only four days before his death, twelve people gathered at the Memorial

Clinic to officially organize the foundation. The ten members of the foundation present were:

- Dr. Paul S. Richards, Sr.
- Dr. Lenore Richards (Dr. Paul's daughter)
- Willard B. Richards, Jr., (Dr. Paul's brother)
- Dr. David A. Dolowitz (worked at the Memorial Medical Center)
- Leland B. Flint
- Alfred C. Emery (University of Utah law professor, later president of the University from 1971 to 1973)
- John D. Richards
- Sidney E. Mulcock
- Otto Wiesley (head of the Utah State Industrial Commission)
- A. C. Mulcock

Also present were two attorneys for the foundation. Missing from the meeting were four other members of the foundation:

- Paul S. Richards, Jr. (Dr. Paul's son)
- Steven C. Richards
- Oscar A. Glaeser (Dr. Paul's collaborator in industrial hygiene, now vice president and general manager of the U.S. Smelting, Refining and Mining Company)
- Henry W. Richards (Dr. Paul's nephew)

Now that the foundation had been organized, its members became the board of directors of the nonprofit corporation. An hour after the organization meeting, they held another meeting, which organized them as a corporation. The following directors were elected unanimously as the foundation officers:

- Dr. Paul S. Richards, Sr., (Chairman of the Board of Directors)
- Willard B. Richards, Jr. (President)
- Dr. Lenore Richards (Vice President)
- Sidney E. Mulcock (Secretary-Treasurer)

Dr. Paul said that he was reluctant to accept the position of Chairman of the Board and that in the event of his death or inability to serve in that capacity, it was his express desire that Oscar A. Glaeser succeed him.

Dr. David A. Dolowitz, who worked in the Memorial Medical Clinic, proposed that the first act of the Foundation should be to endeavor to establish a Paul S. Richards, Sr., Professorship in Occupational Medicine at the College of Medicine at the University of Utah. A three person committee was selected to contact the University, headed by Alfred C. Emery.

The foundation's funding came from several sources. After setting aside money to support his wife and her medical needs, Dr.

Paul apparently donated the rest of his financial holdings to the foundation. Dr. Paul and Dr. Lenore donated medical equipment, supplies, furniture, and other items that they had purchased for the clinic. The equipment and furnishings donated by Dr. Paul and
200 Dr. Lenore were valued at \$80,000. The foundation now owned the clinic. The clinic was valued at \$275,000, with \$37,500 of that total being the value of the land. Willard B. Richards, Jr., initially only donated one parcel of land to the foundation, with a promise to donate the other two parcels in the future. Six months later, those donations had been made, and a new evaluation of value of the clinic and its land brought the total value to \$363,500.

An agreement was planned for the medical doctors of the clinic, a separate partnership called the Memorial Medical Center, to rent the clinic building. This became a major source of ongoing income for the foundation. A year later, a lease agreement was signed between the foundation and the Memorial Medical Center partnership, where for the next five years the partnership paid \$2,000 a month in rent, and also agreed to spend at least \$250 a month on improvement or renovations. The building was to be maintained in the same condition as originally found by the partnership. In 1965, the agreement was extended, at the same rates, for the next fifteen years.

The value of the building, furnishings, and equipment, were put at \$318,568 in 1967. With the coming of changes in how medical insurance worked and the rise of managed care, it became more difficult to keep the Memorial Clinic independent. On the last day of 1991, the Memorial Medical Clinic partnership was ended, and on the first day of 1992, the clinic reopened as part of the Salt Lake Clinic. The same doctors and staff remained and patient care continued. Later in that year, the building was sold by the foundation to the Salt Lake Clinic for \$596,000.

State law required that the foundation disburse five percent of their net worth every year and they often donated between \$35,000 and \$45,000 a year to the various local universities for science scholarships and development. The foundation initially gave its annual contributions to the University of Utah. An initial large contribution of around \$100,000 was supposed to go toward founding an endowed professorship in Richards' name, but the money was diverted into building the University of Utah Medical Center. At that time the university was struggling to find enough money to build their hospital and many contributions were diverted into that project. The seven-story, 220-bed Medical Center was completed in 1965 for a total cost of \$15,675,000. A plaque in the University Hospital Emergency Department noted that this part of the hospital was made possible by a donation from the Richards Memorial Medical Foundation.

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The University of Utah also received other donations from the foundation. For instance, in 1967 the foundation gave \$35,000 to the University, and within a year of that time, the University of Utah was able to rejuvenate its "non-faculty'd" Department of Preventive Medicine. In 1970 the department was further expanded and renamed the Department of Family and Preventive Medicine. A photograph of Dr. Paul S. Richards, with a bronze plaque reading: "Dr. Paul S. Richards Memorial - Department of Preventive Medicine," hands in the department entryway. The only other donations by the foundation

in 1967 were \$500 to the “Pioneer Craft House – Crippled Children” and \$750 to the Ogden Surgical Society. In 1967, the value of the foundation, including the value of the Memorial Medical Clinic building and cash in bank accounts, was \$406,910.

202 The foundation board eventually turned away from giving to the University of Utah to giving money to other colleges and universities in the state, funding scholarships and laboratory equipment, not only in the medical fields, but also in supporting fields, such as physics, chemistry, biology, and microbiology. For instance, the foundation donated \$24,000 a year from 1987 to 1991 to Dixie College in St. George, which was used to buy twenty-four Olympus microscopes, fifteen wide-field stereomicroscopes, and a single autoclave (which cost \$27,134 alone). Donations were also made to Southern Utah State College (now University) in Cedar City and the College of Eastern Utah in Price. Such gifts were still within the original purposes of the foundation. As older foundation board members were replaced by new and younger members, the foundation’s attention and financial support again turned to the University of Utah School of Medicine and to issues of public health, preventive medicine, and occupational medicine.

Rocky Mountain Center

In the 1970s, the federal government passed legislation that increased the federal role in regulating health and safety standards for industry. Part of that effort included creating educational and research centers around the country. In 1977, the University of Utah opened the Rocky Mountain Center for Occupational and Environmental Health. The concerns of the center were the same concerns that had driven much of Dr. Paul’s professional life, and he would have whole-heartedly supported its mission. Ed Mayne, a local union leader and member of the state legislature, was a key supporter of the center for years. He was also the son of Red Mayne, the boy who lived

at the Bingham Hospital and thought of Dr. Paul as his surrogate father. Ed Mayne's middle name was Paul, in honor of Dr. Paul.

In the 1990s, a new generation of board members at the Richards Memorial Medical Foundation formed a new relationship with the University of Utah and renewed attention to medical education and preventive healthcare. The foundation began to fund scholarships for medical students at the University and by 2002 had donated \$120,699.50 for this purpose, giving scholarships to two or three medical students a year. This was much closer to the original purposes and objectives of the foundation. In 2002 the foundation learned of an opportunity to fund an endowment to support an annual lectureship at the University of Utah, under the auspices of the Rocky Mountain Center for Occupational and Environmental Health. Receiving the foundation's financial support led to this lectureship being named the Paul S. Richards, MD, Endowed Distinguished Visiting Lectureship in Occupational Medicine. The first lecture was held on April 16, 2004. The Richards Memorial Medical Foundation and the Rocky Mountain Center for Occupational and Environmental Health had now come together. This was fortuitous, since the Rocky Mountain Center was also a part of the legacy of Dr. Paul.

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A Final Honor

As the Rocky Mountain Center sought more stable sources of funding in the early 2000s, the idea of creating an endowed chair in occupational medicine for the center director emerged. No one is sure who first suggested it, but such an idea was entirely consistent with the original goals of the Richards Memorial Medical Foundation. An endowed chair required one million dollars, but the foundation only had three-fourths of that. The Workers Compensation Fund, through Dennis Lloyd, offered to supply the missing \$250,000.

On September 18, 2008, the Richards Memorial Medical Foundation donated \$689,433.94 to the University for the endowed chair. The amount would have been \$750,000, but a dramatic downturn in the economy had impacted the fund's holdings. The University recognized the donation as equivalent what the value of the foundation's proposed gift was at the time negotiations to establish the endowed chair had first been initiated. The necessary papers were signed and the foundation retained only a few dollars in order to settle accounting matters. All that then remained were the legal arrangements to close down the foundation. A luncheon on October 27, 2009 formally inaugurated the Dr. Paul S. Richards Endowed Chair in Occupational and Environmental Health and Safety, making the Rocky Mountain Center the only Education Resource Center to have an endowed chair. Dr. Kurt Hegmann, the director of the center, became the first to occupy the chair.

204 The foundation's support of the Rocky Mountain Center was more than just financial. The story of Dr. Paul and his dedication to occupational health and worker safety, as a pioneer in what the Center is striving to do today, have helped "give the Center more visibility." The activities of the Richards family have also given the Center more recognition and more credibility with the larger community in Utah.

Organizations like the Rocky Mountain Center and endowed positions like the Dr. Paul. S. Richards chair will help occupational medicine as it struggles to redefine its role in the future. The passage of federal safety legislation in the 1970s and federal investment in organizations like the Rocky Mountain Center encouraged medical students to choose occupational medicine as their specialty. Changes in how health care is now delivered in the United States limited the number of positions available for these new specialists. Company doctors are relatively rare compared to earlier periods. By the late 1990s, many in occupational medicine felt that their field was in crisis. Earlier efforts to expand the role of occupational medicine

to include environmental medicine, a natural progression, had not flourished as many had hoped. Occupational and environmental medicine still plays an important role, but efforts to include occupational medicine as a standard part of the medical curriculum have not succeeded. That this crisis is occurring is ironic, considering that environmental concerns are growing.

Dr. Paul demonstrated his life-long commitment to occupational medicine with the creation of his medical foundation, a lasting legacy to the medical doctors in the Richards family. The initial goals of the foundation included the support of industrial medical research and the creation of a chair of industrial medicine at the University of Utah. Those goals had now been achieved.



Conclusion

MAKING A DIFFERENCE

206 In a popular 1978 series of documentary programs, *Connections*, the British journalist James Burke described how one invention had led to another by a series of connections that at first are not immediately obvious. For instance, the punched cards used in modern computers until just a few years ago can trace their existence back to textile factory workers two centuries ago who used cardboard cards to reconfigure their looms to create different cloth patterns. History is filled with such connections. One of those connections is between Dr. Paul S. Richards and the Rocky Mountain Center for Occupational and Environmental Health. Even though the Center was founded two decades after Dr. Paul's death in 1958, the life mission of Dr. Paul and the mission of the Rocky Mountain Center are the same — a deep concern with worker safety, occupational medicine, and making the world a safer and better place. Dr. Paul wanted to make a difference in the future when he set up the Richards Memorial Medical Foundation. Over the years, his foundation did make a difference, but its final act to pour all of its funds into creating an endowed chair for the Rocky Mountain Center perfectly fit the vision that he had for the foundation.

There has been a significant cultural shift during the past century, from a time when industrial injuries and other occupational hazards were considered part of the natural order of things, to a new culture of safety, where no accident or hazard is considered acceptable. Numerous safety textbooks, university educational programs, professional associations, and safety professionals working on the front lines at corporations and other organizations, are all part of a safety complex promoting a culture of safety.

Many different people and many different organizations helped make Utah a safer place for workers. Attitudes changed as business owners tried to improve working conditions, unions demanded safer workplaces, and legislators passed laws mandating safety improvements and managing legal liability. Medical doctors added their voice, relying on their expertise in injuries and lending their reputations to the movement towards safety. All of these changes in Utah reflected nation trends.

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One of the most effective voices in Utah came from the medical doctor who ran the Bingham Canyon Hospital from 1922 to 1948. Dr. Paul Snelgrove Richards was an influential pioneer in industrial medicine in Utah, as well as in worker safety and in medical rehabilitation from work injuries. By the time of his death in 1958, Dr. Paul was a recognized national authority in industrial medicine. He promoted many medical and safety innovations. While Dr. Paul S. Richards has not been recognized as making a major contribution to any one particular field, his interests and activities contributed to smaller advances in a number of fields, refining the work of others in industrial medicine and rehabilitative surgery.

Dr. Paul's legacy is found in the lives of his patients, his family, and the Rocky Mountain Center.



Paul S. Richards when a young boy. *Courtesy of the Richards family*



Willard Richards, Sr.
Courtesy of LDS Church History Manual



Paul S. Richards as a young man.
Courtesy of the Richards family



Paul S. Richards on his LDS mission to Scotland.
Courtesy of the Richards family



Paul S. Richards and Willard were LDS missionaries in Scotland together.
Courtesy of the Special Collections Dept., J. Willard Marriott Library, University of Utah.



A train tumbled down into the town of Bingham, Utah, from its tracks on the hillside above the town. (About 1912)

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A train tumbled down into the town of Bingham, Utah, from its tracks on the hillside above the town. (About 1912)

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Ethel Bennion Richards and Paul S. Richards on their first wedding anniversary on September 7, 1917, while he was a student at Harvard University. (1917)

Courtesy of the Richards family



Dr. Paul and Ethel, with their oldest daughter Lenore. Probably taken about 1920, since Lenore looks to be about three years old. (About 1920)

Courtesy of the Richards family



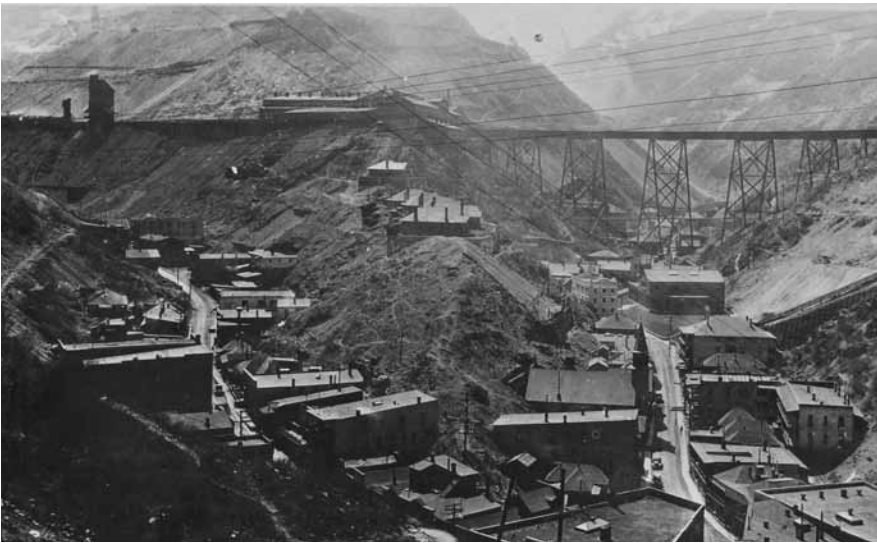
Lenore Richards and Rose Dalton in Boston, when Paul S. Richards, Lenore's father, was a medical student at Harvard.

Courtesy of the Special Collections Dept., J. Willard Marriott Library, University of Utah.



Bingham Canyon, Utah. (about 1920)

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Bingham Canyon, Utah. ("1926")

Used by permission, Utah State Historical Society, all rights reserved.



Men clearing and searching the wreckage left by a snow slide. (unknown date)
Courtesy of the Special Collections Dept., J. Willard Marriott Library, University of Utah.



Bingham Canyon, Utah. ("1926")
Used by permission, Utah State Historical Society, all rights reserved.



A train wreck at Bingham Canyon, Utah (note the outhouses over an open sewer ditch)

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Bingham Canyon, Utah. ("1926 or '27")

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A fire at Highland Boy, Bingham Canyon. (September 8, 1932)
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Bingham, Utah, fire at Highland Boy. (September 8, 1932)

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Bingham Canyon, Utah. (Date unknown)

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Safety First sign at the Columbia Coal Mine. (Date unknown)
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Bingham Hospital. (Date unknown)
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Dr. Paul dressed to go into a mine. (Date unknown)
Courtesy of the Richards family



Richards family photograph. (from circa 1930)
Courtesy of the Richards family



Dr. Paul S. Richards and Rolland (Red) Mayne as a patient in a 1937 parade.
(1937) *Obtained from Dennis Lloyd of WCF (original from the Jordan School District)*

Statement
BINGHAM CANYON HOSPITAL

P. O. Box 709 Telephone No. 4
2-12-42
Bingham Canyon, Utah, _____

TO:

Mr. Henry W. Richards,
1790 South 9th East St.,
Salt Lake City, Utah

Service Rendered to: Mrs. Vera Richards

Room Rent:	7 days @ \$3.00	\$21.00
1-17-42 to 2-10-42, 24 days: 17 days @ \$6.00		102.00
(Occupied room first seven days part of time)		
1-25-42, Delivery Room,		5.00
Dressing,		5.00
2-5-42, O. R., Blood Transfusion,		5.00
2-24-42, O. R., Circumcision		5.00
Special Drugs:		
Glucose, 4 X 1000 CC Intravenous Inj. @ \$2.00		
each 1000 CC	\$8.00	
Lextron Caps.,	4.80	12.80
Total Hospital	-----	\$155.80

Dr. Paul delivered his grand nephew, C. David Richards, at the Bingham Canyon Hospital in 1942, leading to this maternity bill. C. David later became a medical doctor.
Courtesy of the Richards family



From the book by Marion Dunn, Bingham Canyon (Self-published, 1973). It is misidentified as Dr. Paul S. Richards and the hospital staff at a picnic on the patio behind the Bingham Hospital. It is Dr. Paul S. Richards on the patio behind the Bingham Hospital, but is a Richards family party. C. David Richards, a grandnephew of Dr. Paul, has identified most of the people at the party: (from left to right)

- 1 - Ed Erickson
- 2 - Louie Gill Richards Broadbent (Dr. Paul's sister)
- 3 - Ben Broadbent
- 4 - Ruby Richards (spouse = Steve)
- 5 - Vera Richards (spouse = Henry)
- 6 - Henry W. Richards (Dr. Paul's nephew)
- 7 - Dr. Paul S. Richards
- 8 - Mary Joy Richards (Dr. Paul's sister)
- 9 - Either Annie Doremus Richards Burton (Dr. Paul's sister) or Dr. Lenore Richards
(Dr. Paul's daughter)
- 10 - Louise Erickson (daughter of Ann Barton),
- 11 - Steve Richards (Dr. Paul's nephew)
- 12 - Alfred Gunderson
- 13 - Martha Richards Eldredge (Dr. Paul's sister)
- 14 - Alta May Richards Gunderson (Dr. Paul's sister)
- 15 - Pauline Gunderson Wallin (Alta's daughter) - identification uncertain

Courtesy of the Richards family



Dr. Paul cooking in the hill garden behind the Bingham Hospital.
Courtesy of the Richards family



Memorial Medical Clinic. (Date unknown) *Courtesy of the Richards family*



Christmas morning breakfast at the Bingham Hospital (Dr. Paul Richards is in the center in front). (Probably 1945 or 1946) *Courtesy of the Richards family*



Newspaper clipping on Dr. Paul S. Richards leaving the Bingham Hospital (November 28, 1948). Note the curious Chaplin/Hitler mustache, post World War II. *Courtesy of the Richards family*



Farewell party for Dr. Paul in December 1948, when he left Bingham.
(Dr. Paul Richards is in the center in front) *Courtesy of the Richards family*



Dr. Paul S. Richards and his children. (Date unknown)

Courtesy of the Richards family



Dr. Paul S. Richards holding a copy of the Thomson's Patent medical license of his grandfather, Willard Richards.. (Date unknown) *Courtesy of the Richards family*



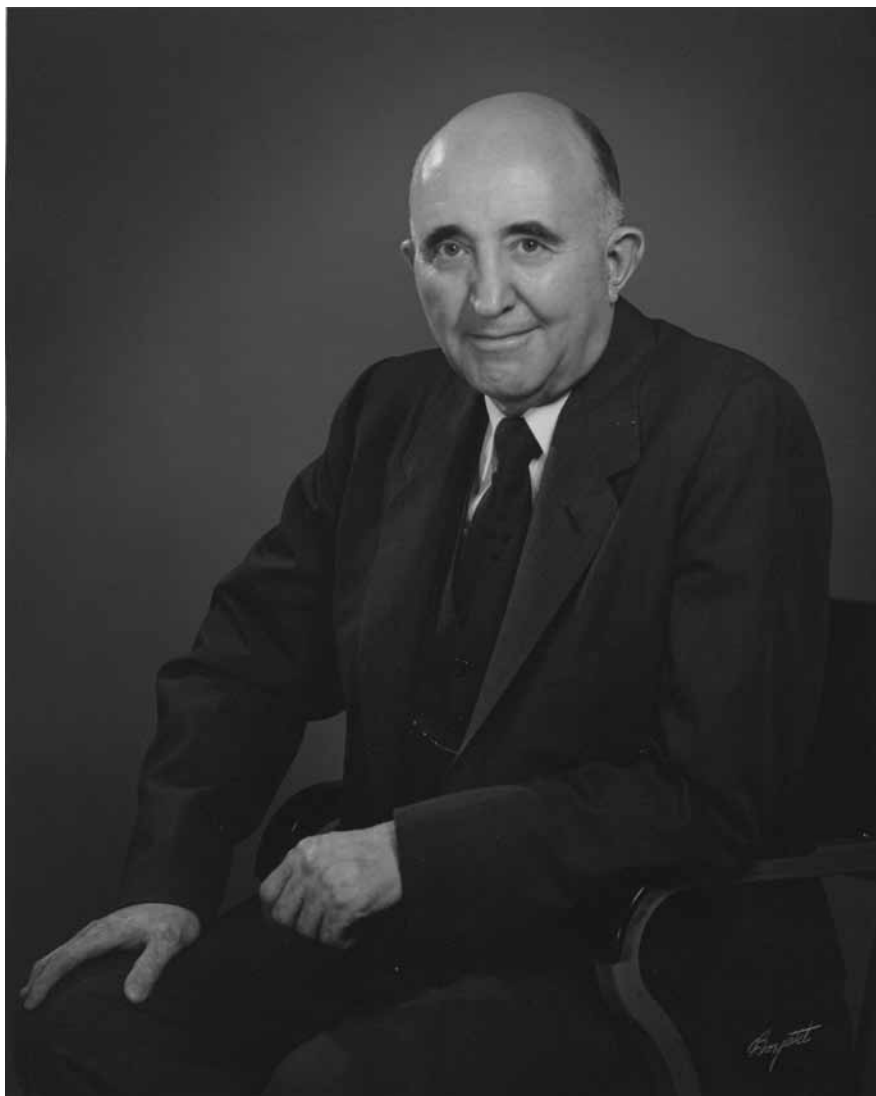
Dr. Paul S. Richards and his daughter, Dr. Lenore Richards, June 10, 1953, taken by the Salt Lake Tribune. (1953)
Used by permission, Utah State Historical Society, all rights reserved.



Paul S. Richards and Lenore Richards on her graduation as a medical doctor from Temple University. (Date unknown) *Courtesy of the Richards family*



Ethel Bennion Richards and Paul S. Richards in December 1957, a year before his death, at their home at 1837 Wilson Ave in Salt Lake City. (1957)
Courtesy of the Richards family



Dr. Paul S. Richards in the 1950s (note the scarred fingers). (1950s)
Courtesy of the Richards family



Dr. Paul S. Richards in the 1950s. (1950s) *Courtesy of the Richards family*



Ethel Bennion Richards and Paul S. Richards in December 1957, a year before his death, at their home at 1837 Wilson Ave in Salt Lake City. (1957)

Courtesy of the Richards family

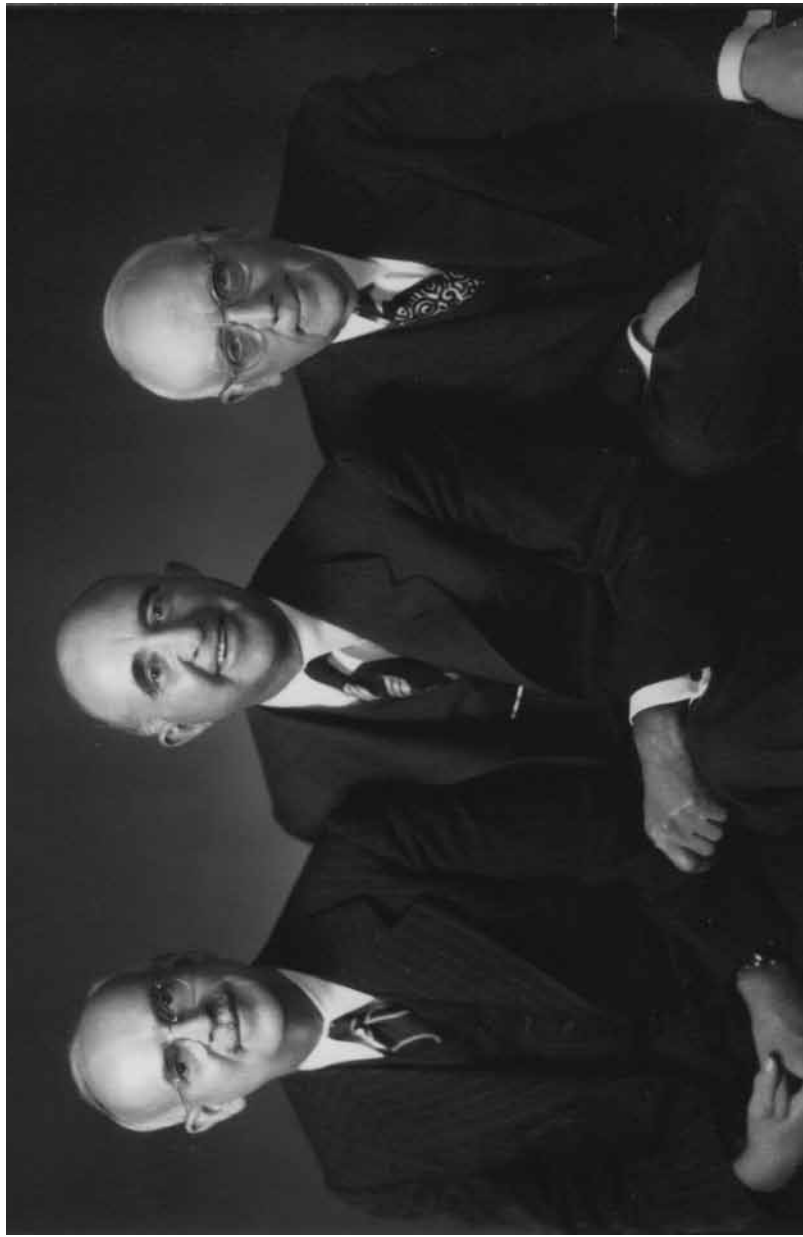


Dr. Paul and Ethel, their three children, a son-in-law, a daughter-in-law, and six grandchildren, taken in December 1957. (1957) *Courtesy of the Richards family*



Ethel and her husband, Dr. Paul, with their three children, Ethel Richards Baker, Paul S. Richards, Jr., and Lenore Richards (l-r), taken in December 1957. (1957)

Courtesy of the Richards family



Dr. Gill, Dr. Paul, and Dr. Ralph. All three medical doctors are cousins and grandsons of Willard Richards..
(Date unknown) *Courtesy of the Richards family*



Clark Richards and State Senator Karen Mayne at the celebration of the creation of the Dr. Paul S. Richards Endowed Chair in Occupational and Environmental Health and Safety at the University of Utah Alumni Center on October 27, 2008. (2008)

Courtesy of Dennis Lloyd at Workers Compensation Fund



Signing of legislation affecting the Rocky Mountain Center by Governor Huntsman of Utah, with members of the Rocky Mountain Center, State Senator Ed Mayne, Red Mayne, and members of the Richards family in the background. (Date unknown)

Courtesy of Dennis Lloyd at Workers Compensation Fund



APPENDIX I

...

Memorials To
Dr. Paul

The following memorials to Paul S. Richards were appended by his sister, Ann R. Barton, to the end of the "memoirs" that he dictated.

* * * * *

Dr. Paul attended a meeting in Chicago with the members of the Council on Industrial Health and he presented each member with a red tie. This verse was in appreciation of that event.

The Bonds That Tie Us To Paul Richards

From the Members of the Council on Industrial Health

The ties that bind men together
...are many.

They are the kind
that stem from friendship
...and other association of the past.

The tie that you have given us
 Stands as a symbol
 ...of everlasting friendship
 ...of common recognition
 of the goals
 and aspirations
 which your fellow physicians
 have striven to achieve
 with your help.

This tie you have given us shall
forever be

like a clasp of the hand
 which brings men together
and tightens the bonds
 of yesterday
and seals them more firmly
 for tomorrow.

The color of your tie
 imparts
 ...the warmth
 ...the affection
that you hold for your brothers
 and which they have for you.

This symbol
 shall always remain
 in our hearts
and forever remind us
 of our tie
 with you
and the ideals
 in which you believe.

- Murray Klutch, May 16, 1958
 Drake Hotel, Chicago

* * * * *

From a letter dated November 2, 1938 to Sister Richards, "This poem tribute comes to you out of a deep, deep gratitude. Perhaps someone has told you how much he had to do for me, and what a long, hard day that was! If we had the price of a big, beautiful gift, then, we could better prove how grateful we are to him. My next best way is like this — a three-in-one tribute to his father (who is there between the lines) and you, and your own Doctor Paul. Best wishes to you all. The Howards."

To the Mother of Dr. Paul Richards

I'd like to be the mother of one
A boy, grown now, who is your son!

I'd like to have closed him in my arm
And felt his baby-heart so warm,
And then when just a little chap
With tousled hair and knitted cap
When it was hard for him to know
About the wind, and rain, and snow.

I'd like to have answered all his "why's"
Just as you did, in ways as wise —
And when brown eyes were filled with tears,
Just to have kissed away his fears
And planted courage in his heart
Fitting him for a leader's part.

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I'd like to have taught him how to pray
The name of Jesus, how to say,
And to have sung night lullabies
As you did to his closing eyes —
And when the "school bell" called that day
And he was all excited and gay,
I'd like to have watched him out of sight,
Trusting in God to guide him aright —

And to have felt the pride you knew
When he returned from his mission true.
Oh, to have known so much of joy
As you have had from this one boy!
To hear his praise again and again
For what he's doing for fellowmen.

To daily hear folks say of him
People whose lives would have been grim,
"I think he'll never really know
How much of life to him, I owe,
How different I look at it,
And how each day I feel more fit!"

"He works with God to relieve pain,
Restoring health, and hope again,
And giving of himself so much
That each new day receives his touch."

He's known throughout the big, wide west
As a great surgeon and the best!

And when men look at him, they know
His mother's made his life to glow.

How great to be the mother of one
A man as skilled as is your son.

- Zelda Howard

* * * * *

As only the memoirs of Dr. Paul have been recorded in the book thus far, it seems fitting now that we should record some of the thoughts and feelings of his friends and coworkers expressing his influence on the lives of those with whom he associated. Many such thoughts were expressed at Dr. Paul's memorial services. Following are a few excerpts from the talks given on that occasion along with the newspaper editorials printed at the time of his death.

Excerpts from an editorial in the *Deseret News*, November 21, 1958:

Dr. Paul Snelgrove Richards, Sr., 65, member of a Utah pioneer medical family and recognized authority in the field of industrial medicine, died Thursday morning, November 20, 1958, of cancer.

Death occurred at the Memorial Medical Center, 2000 South 9th East, which he helped to establish several years ago. Although he had been in failing health for some time, he remained active until a few days before his death. Only last Sunday he presided at a meeting where final plans were made for the Richards Memorial Medical Foundation, organized to foster medical research.

Dr. Richards has been engaged in many civic affairs. He served sixteen years as a member and ten years as President of the Jordan District Board of Education. He was largely responsible for the decision to build the Bingham High School in Copperton.

He held affiliations with several clubs in Bingham Canyon and Salt Lake City including Rotary, Kiwanis, Lions, Ambassador, Timpanogas and Bonneville Knife and Fork Club. For a number of years he was on the Boy Scout Council of Bingham District and received the Silver Beaver award for his activities.

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He was acclaimed for his contributions in the management of such problems as silicosis, fractures and back injuries.

He was a member of the Medical Labor and Industrial Council whose recommendations resulted in the enactment of Utah's first occupational disease law by the 1941 Legislature. In 1953 with Dr. Louis E. Viko, he received a presidential citation for contributions in aid of the physically handicapped.

Dr. Richards also became the first associate clinical professor of industrial medicine in the University of Utah College of Medicine. He was a charter member of the American Board of Industrial Medicine; a member of the Council on Industrial Health, American Medical Assn.; consultant to the U.S. Public Health Service, member of the American Industrial Hygienists Assn.; fellow of the American College of Surgeons, member of A.M.A. Utah State Medical Assn.; member of Salt Lake County Medical Society and Western Hospital Assn.

A few years after he set up a practice in Salt Lake City with his daughter, Dr Lenore Richards, he became co-founder of the Memorial Medical Center, where he served as senior consultant to a large staff of practicing physicians and surgeons. He held this position until his death.

* * * * *

Quotations from a tribute to Dr. Paul by Otto Wiesley, Chairman of the Utah State Industrial Commission

*"Silently one by one.
In the infinite meadows of Heaven,
Blossom the lovely stars,
The forget-me-nots of the angels."*

Thursday morning Dr. Paul passed away. If you gaze at the starry heaven you may find a new star — Paul's star — smiling through the darkness of night. And, if your ears are attuned to messages from the Great Beyond, you may hear him say, 'All is well, carry on my unfinished work.'

I became acquainted with Dr. Paul about thirty years ago at Bingham Hospital. We became fast friends. Our friendship never faltered. Together we traveled to Saranac Lake, Milwaukee, Pittsburg, Chicago and elsewhere to attend national conferences on Industrial Medicine. He was a wonderful companion and a great teacher. For thirty years he was my right arm and medical brain. I do publicly admit that the remarkable accomplishments of the Industrial Commission of Utah in the field of industrial medicine since 1941 must be credited almost entirely to Dr. Paul. It was not alone his knowledge of medicine that helped us build an Industrial Medical program which amazed the medical and industrial societies throughout the world but the real story was beautifully expressed in a Deseret News editorial on November 21, 1958. I quote only the second paragraph of the editorial entitled, "Dr. Richards: A Symbol of Greatness." 241

It is true that this big and friendly man was a dedicated medical scientist. But when medical science is supported by genius, by scrupulous honesty, by an all-embracing technique, by fertility of scientific insight as it was in the life of Dr. Richards — then we have a great medical humanitarian.

* * * * *

An anonymous poet

Life is a leaf of paper white
Upon which each one of us may write
His little word
And then comes the night.

Dr. Paul has written his little word. It speaks volumes.

* * * * *

Oscar Glaeser, Vice President and General Manager of the U.S. Smelting, Refining and Mining Company

242 *I have been asked to make a few comments relative to the monuments that our beloved brother has left behind. He has given us a great heritage, not only in his wonderful work, but the achievements of a doctor, a scientist, a philosopher, and humanitarian. He has also given us work to do and for this we should be grateful. In his great wisdom he has given us two wonderful institutions, the Memorial Medical Center, and the Richards Memorial Medical Foundation. [Mr. Glaeser will be chairman of the Board of the Richards Memorial Medical Foundation, succeeding Dr. Paul.] I know from personal contact that he dreamed of these for many years, and we can be ever grateful that he was given time to make them realities.*

The Memorial Medical Center is an organization of physicians, surgeons—specialists, in their fields and staff to render medical functions. On the other hand the Richards Memorial Medical Foundation is wonderfully conceived and organized to perpetuate industrial medical research, and to create a chair of industrial medicine at the University of Utah. It has tremendous potentialities to foster and promote advances in medicine. The Foundation will also be the manager of certain property, including the clinic and some of the equipment therein. The clinic will be rented from the Foundation which, so to speak, will be the landlord. These two organizations are tremendous monuments to Dr. Paul's memory and to his work. May God give us wealth and the wisdom with which to keep on building that which he started so well.

* * * * *

Dr. Louis E. Viko, schoolmate and life long friend of Dr. Paul

I have known Paul well since our days together as medical students in Boston and have had the opportunity to participate in a few of his many activities that were in addition to the practice of medicine.

Let me sketch briefly a little of his life. After medical school he had excellent training especially in surgery in the Cincinnati General Hospital. That hospital had every facility and plenty of doctors to give the best of care to the patients. Then Dr. Paul came to Bingham. There seemed to be more work than any one doctor could do and give good care. But he did give good care by setting for himself the pattern of starting his day at 4: 30 or 5 o' clock in the morning and working until late in the evening, a pattern that he kept until about a week before he died. He was outstanding in this region in care of the men suffering the serious mine injuries which were so common.

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When he came to Bingham the hospital facilities were poor. He built them up until they equaled or were better than some Salt Lake hospitals. Paul was not content to just treat the injured and the ill but spent much time in measures both injury and illness. This was a field where he had to persuade management and workers, traditionally antagonistic and suspicious, to work together for a common purpose.

Then Dr. Paul got busy in securing legislation providing compensation for industrial diseases that are directly due to working conditions; such as silicosis. This was a highly controversial issue. Bills presented to previous legislatures had failed to pass because labor and industry could not agree. As a member of a joint labor-industry committee, Paul respected both. By its industry and labor members, he was able to persuade both to agree on an industrial disease compensation law, and what was far more important, to have it presented to the legislature with both labor and industry asking that it be passed without change. When the legislature did pass it, it set a pattern for labor-industry cooperation in following legislature, which most states would have considered impossible.

Then working with Mr. Wiesley, Chairman of the State Industrial Commission, he was largely instrumental in setting up a system of adjudication of both the industrial disease and industrial accident laws, unique in this state and far more fair to industry and the worker than systems in other states.

But Paul was not content to leave the disabled worker out of sight and out of mind, living, not too well, on compensation. He took an active part along with Dr. Harmon of the State Board of Education, in pioneering rehabilitation and retraining and self-respecting at a much higher economic level.

Dr. Richards was a man of unparalleled courage. For over four years he had an illness, the outcome of which he well knew. In pain most of the time he lived what he believed, that most people, however disabled, can lead useful productive lives. With little to say about himself or his illness, he carried on as before. A few weeks before he died, he took an active part in a medical convention held in Chicago. Until one week before, he carried on his practice still beginning at 4:30 a.m.

244 *When I saw him two days before his death, he expressed no fear or anxiety. His voice broke a little when he said he had told the nurse he would not be seeing any more patients. When I commented that it was hard for a doctor to know all about his illness, he said, "Not necessarily, it is interesting to know and watch its course."*

All that he accomplished could not have been done without the love and understanding help of his wife, Ethel, and his children. Their sorrow and loss may be tempered a little by justified pride in him and their share in his life.

* * * * *

President Reed M. Beckstead, Superintendent of the Jordan School District and President of Midvale Stake

Dr. Paul Richards was eminently successful and I feel he merits this definition of success, written by Mrs. A. J. Stanley. 'He has achieved success who has lived well, laughed

often and loved much; who has gained the respect of intelligent men and the love of little children; who has filled his niche and accomplished his task; who has left the world better than he found it, whether by an improved poppy, a perfect poem or a rescued soul; who has never lacked appreciation of earth's beauty or failed to express it; who has looked for the best in others and given the best he had; whose life was an inspiration; whose memory is a benediction.

Dr. Paul well characterized that statement in the success he lived and achieved. The character, the life, the works, and the personal philosophy of this great man will furnish an abundance of material for biographers and historians. I should like to suggest just a few chapter headings that might be used (only eleven of twenty-eight headings are quoted):

1. He dignified Work.

2. A Great Teacher.

3. A Skilled Physician and Surgeon

He Put his Heart into His Work

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4. A Man with a Common Touch

He looked beneath the color of the skin or the type of nationality of his patients and he talked the language of the man on the street in Bingham.

5. A Wholesome, Hearty Sense of Humor

An outstanding quality to relieve the tension of any role of leadership that he so eminently filled.

6. A Depth and Breadth of Spirituality

On occasions it has been my rich experience to speak with him at funerals. I have heard him give some of the most beautiful and soul stirring prayers I have ever heard.

7. A Community Builder

Just since his passing, a citizen of Bingham made this remark, "Bingham has never been the same since Dr. Richards left."

8. *An Inspirer of Thought and a Molder of Action*

I marvel how well informed he was, not just in the field of medicine but in philosophy, poetry and in the environment which surrounds us.

9. *His Christian Way of Giving Alms*

The Churches in Bingham and other great organizations of society have been benefactors of his generous giving. I suppose the extent of his alms, given in the true Christian way, will never be entirely known by mortal man.

10. *Lover of Poetry*

One of his favorite poems was—

The Need for Men

by Josiah Gilbert Holland

Give us men! The time demands

246 *Strong minds, great hearts, true faith and willing hands:*

Men whom the lust of office does not kill;

Men whom the spoils of office cannot buy;

Men who possess opinions and a will;

Men who have honor; men who will not lie;

Men who can stand before a demagogue

And damn his treacherous flatteries without winking;

Tall men, sun-crowned, who live above the fog,

In public duty and private thinking.

Dr. Paul put public service, both in his profession and in his many leadership roles above private gain. He could not be bought for a price, and so I quoted that poem. Here are the titles of other poems that he quoted frequently:

"The Mystic Border Land"

"God Walks upon the Hills"

"God Meets Me in the Mountains"

"A Prayer for the New Year"

"Myself"

"Little sayings of Dr. Paul -

"Self pity is a curse to humanity."

"The essence of the measure of one's success in life lies not necessarily in the number of years that one lives, but in the kind of living that goes into those year."

"The flexibility of your adaptability is the true measure of your intelligence." And frequently in his discourses he used what he referred to as the Master Word - that Master Word is WORK.

11. A Dynamic Leader

In the roles of leadership that he filled, he was a key man. An impression that has always stood with me is that he never used his key position of leadership to lock up the power of his fellow associates. On the contrary, he used his key position to unlock the potentials in his co-workers - a great quality of a leader. He stood for both quality and quantity in education. I believe that Dr. Paul had the concept that a school board member occupies a most unique position in democracy. He makes policies that influence the lives and characters of generations of people. He functioned under that philosophy. He expected every man in the organization to be a producer. He didn't expect us to do the things that he himself would not do. All who knew him intimately knew that he practiced what he preached. He was a producer in any role of leadership that he played.

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I should like, at this time, to express appreciation for the influences that have come into our communities because of the posterity that Dr. Paul has left. We know these things could not have been accomplished without the cooperation of a noble companion and helpmate like Sister Richards. I would like to say to Dr. Lenore, another noble physician and surgeon, and to Paul and Ethel, and their families - who have been leaders in our communities - we feel sure you will carry on the rich heritage that has been bequeathed you.

May God bless his memory and help us all to emulate the noble virtues of his character.

* * * * *

Bishop Henry W. Richards, Manager of Granite Furniture Company and nephew of Dr. Paul

I loved Uncle Paul and I want publicly to tell you people that I loved him from the bottom of my heart. There are a lot of people here today who loved him and like one of the nurses at the clinic said to me, 'If love would heal a man, that man would be the healthiest man alive.'

I have tried to think what unusual things we might remember most about him as the years go by and there are two things that come vividly to my mind.

1. Most of us will remember 4 o'clock appointments in the morning. He loved to get up early and he loved to get other people up early.

248 *2. Most of us will remember 'that laugh'. I think that his laugh has probably done as much to heal people and make them forget their troubles as the needles have that he has stuck in them, and I say that sincerely and honestly. He carried with him a strength that is seldom felt in other men.*

He loved life not because he was selfish and wanted to live but because he was a dedicated man — dedicated to help other people. He lived well and he learned much. He gathered from the garden of life the most beautiful bouquet of flowers that I have ever seen any man carry, and he had a way of presenting those flowers to us that was wonderful. He taught in parables like the Savior taught. I don't think I would be out of order if I said that in one respect he was a savior to many of us present here today. Many of us owe our lives to him and I am sure if he could stand here and say a last word to you folks today, he would say, 'You don't have me to lean on now, but just because I am gone, don't give up.' If you do give up and you meet him soon, he won't put his arm around you and welcome you unless you have fought a good fight here in life.

Uncle Paul always looked for the good things in life. He had his troubles and his problems and there were sad parts in his life too but he always applied the little motto which hung

over his desk — The Flexibility of your Adaptability is the True Measure of Your Intelligence. Uncle Paul was a flexible man. Uncle Paul was an intelligent man and he would like all of us to accept the disasters, the trials and troubles that come to us in a flexible way and adapt ourselves to them.

He loved his family. Everyone of us that are in the family, regardless of how far removed, know he loved us because he did so much for us. He loved his wife and his children and he loved his father and his mother. Not too long ago, as my son David and I visited him, he said, 'David, I want you to remember this one thing that your grandfather said to me as I left on my mission when I was 19 years old. He said, Son, never do anything that you wouldn't be proud to have your mother see you do. Those words have rung in my ears all these years and if you children and grandchildren will remember and follow them, your father and grandfather will be very proud of you.'

Uncle Paul always looked for the good side of people. He didn't care about the bad side of them. I'm going to tell you a little story he told me, when I said, 'Uncle Paul, I want your picture in my office next to Benjamin Franklin.' He said, 'I'm glad to hear you say that; I have the highest admiration for Benjamin Franklin. He was a man of courage, and he left an influence here in this country that will be felt for years. I want to tell you a story. I went back to Boston to meet with a doctor and I told this doctor I liked to stay with him because of the influence Benjamin Franklin had in that part of the country.' The doctor didn't agree with Uncle Paul. He despised Benjamin Franklin. He pulled a book off the shelf and said, 'Doctor; read this book, maybe you'll change your mind.' Uncle Paul left and went north for a week and when he came back he handed his host the book and said, 'Doctor, after reading this book I think more of Benjamin Franklin than ever before.' The doctor was amazed because the author had depicted a Benjamin Franklin that you and I don't know. He brought out Benjamin Franklin's faults and enlarged upon them; and told about his escapades with women and some things that Benjamin wasn't proud of. Uncle Paul said, 'After reading that book, and knowing that he did all those things, if the author is telling the truth, I think more of him than ever before to think that he had the time to accomplish the things that he did for good.'

Then he turned to the doctor and said, 'Doctor, let me ask you just one question. Would you like me and your associates here in Boston to judge you by the good that you have done for humanity, or would you like us to judge you by the things you did while you were in medical school? Because Doctor, you know and I know, you did things in medical school that you are not proud of.'

I want to tell just one more thing. Tuesday was the last day I saw Uncle Paul. I knew it would be the last day I would see him because I remember well the way he told me good-bye. He had never done it that way before. He said, 'I can't fight this thing any longer because we don't know what it is, I just have to ride it out.' He took my hand in his, and kissed me, and I kissed him. Tears came to our eyes, and I said, 'Uncle Paul, you've got a lot of friends on this side, but you've got a lot of friends on the other side too who will be waiting to meet you.' He said, 'Hen, I haven't got as many friends on the other side as I have on this side.' And I said, 'Oh, yes, you have.' Then he said, 'Good-bye, God bless you, Hen.' (He always called me Hen).*

250 Tears came to both our eyes, we choked up, and then he said four other words that I shall never forget, 'My heart is right.'

* * * * *

A Tribute To Paul S. Richards, M.D.

Many years ago, in the fall of 1922, a young doctor, Paul S. Richards began his career as a physician and surgeon in Bingham Canyon, Utah.

Through the years Dr. Paul labored in the field of medical research in environmental health. He was a familiar figure at national and area medical conferences. He became a leader in the study of industrial medicine. He was praised by his colleagues for his vision, his courage and his forthrightness in the search of medical truths.

*Dr. Paul passed away Thursday morning, Nov. 20, 1958.

Much of the progress recorded through the years in the advancement of industrial medicine nationally, and especially locally must be credited to Dr. Paul S. Richards.

The Utah Occupational Disease Disability Law is a monument to years of study and endeavor he devoted to industrial medicine.

BE IT THEREFORE RESOLVED THAT:

The Board of Directors of the Richards Memorial Medical Foundation express deep appreciation for the unselfish contribution made by Dr. Paul S. Richards during his lifetime to the advancement of environmental health and particularly industrial medicine, and his contribution to future discoveries by the establishment of the Richards Memorial Medical Foundation.

- By Order of the Board of Directors:

Signed this twenty-third day of March, 1959

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W. B. Richards, Jr.	Oscar A. Glaeser
Lenore Richards	Otto A. Wiesley
Sidney E. Mulcock	John D. Richards
David A. Dolowitz	Paul S. Richards, Jr.
Henry W. Richards	Stephen C. Richards
Alfred C. Emery	Leland B. Flint

The Memorial Medical Center was dedicated July 1, 1953 to Dr. Willard Richards and his sons Dr. Heber John Richards, Dr. Joseph S. Richards and Dr. Stephen L. Richards, pioneers of medicine in Utah.



APPENDIX II

...

Dr. Paul S. Richards

A MEMOIR

The Salutation of the Dawn

Listen to the exhortation of the dawn

Look to this day!

For it is life, the very life of life,

In its brief course lie all the

Varieties and realities of your existence;

The bliss of growth,

The glory of action,

The splendor of beauty.

For yesterday is but a dream,

And tomorrow is only a vision

But today well lived makes

Every yesterday a dream of happiness,

And every tomorrow a vision of hope.

Look well, therefore, to this day!

Such is the Salutation of the Dawn!

- Sanskrit

"The exhibility of your adaptability is the true
measure of your intelligence."

Foreward

In the summer of 1957, I went to Salt Lake City to visit my sister Joy at the old home, 935 Hollywood Avenue. Our brother, Dr. Paul Richards, was suffering from malignancy and had undergone every type of treatment that medical science knew to arrest the disease. He was also organizing the Richards Memorial Medical Foundation so he was under great stress and strain. Each day he came home for lunch and a rest. We reminisced and had many visits filled with fun. I can still hear his contagious laugh and see the wonderful relaxation which came to him.

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The things he told us were so interesting that we wanted to get them in writing so that his experiences could be recorded for his family and friends. Willard's grandson, David, lent us his tape recorder and we motivated Dr. Paul to talk by asking him questions about his various experiences. Then we recorded his answers. I have tried to give his exact words as often as possible. Some days he was so sick that he told us very little and the words came with effort, but other times his narratives seemed to flow with ease.

His capacity for work and his endurance had been so great that he didn't realize many people could not keep pace with him,

and unconsciously he tried to push them beyond their capacity. Some felt he was a hard taskmaster. When he became ill, he realized this and said-he owed many people an apology. He always demanded more of himself than of anyone else, however.

One of his great concerns in his last illness was that he do nothing to make the home duties heavier for his family. Mother Ethel had been home bound for years with the palsy and still requires a great deal of care. He was so proud of the way she had accepted her illness and the great patience that she had developed and he often wondered if he would have been as brave had he been in her condition.

258 He felt that Dr. Lenore with her medical practice and her responsibilities at home had all she could carry and he was very anxious to relieve the family of extra worry concerning himself. In our off the record chats, he spoke many times of the help he had received from his wife, family, patients and friends in solving his various problems. His scope of life was very broad and so many people contributed that I cannot mention names. But I am sure he would want me to say that their confidence and understanding had inspired him to work long and hard. Whatever success he attained was the result of this encouragement plus the effort, time and talent that he contributed. He often said, "How one uses his time determines what he becomes in life," and "With sufficient time and effort one can overcome or adjust to practically any difficulty." His life was a living example of this type of thinking.

Ann R. Barton

Chapter 1: Family Background

My father was Willard Brigham Richards, son of Dr. Willard Richards[†] who was in jail with the Mormon prophet Joseph Smith at the time of his martyrdom. Father was born at Winter Quarters, January twenty-fifth, 1847 and arrived in Utah with his parents in October 1848. When Father and Annie Doremus were married on July twenty-second, 1877, they went to Mendon, a little town in northern Utah, to live. Their home was a two story rock house in the heart of town and their little farm of thirty-five or forty acres was about a block and a half away. This little plot was very fertile, and with irrigation, Father raised wonderful crops. This was the home where my four older brothers were born: Willard, who died at birth, Willard Brigham, Jr., Preston Doremus, and Albert Zabriskie. When Willard B. was six years of age, Father and Mother wanted to move back to Salt Lake where their children could get good schooling. Also Father had raised a race horse L. C. Lee, which had won all the races in northern Utah and Father wanted to try for the title in Salt Lake. With these things in mind Father visited the capital city and looked for a home where he would have plenty of room to raise his family and also be

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[†] Grandfather was second counselor to President Brigham Young of the Church of Jesus Christ of Latter day Saints and was a member of the first company of pioneers who entered the Salt Lake Valley on July 4, 1847.

conveniently close to town. He found one five miles out on Ninth East in Sugar House which comprised an eighteen acre lot, a seven room house, a work shop with some sheds. After several months of negotiations with Mr. Wagstaff, the owner, Father traded his home and irrigated farmland in Mendon[†] for the Sugar House property and moved to Salt Lake in March 1885.

On September twenty-third of that year, my sister Alta May was born, and on May nineteenth, 1888, Annie Doremus joined the family. After her birth Mother Annie became very ill and died six days later. On her death bed she gave her baby to her lifelong friend, Louie Snelgrove, and said, "Take good care of my baby."

260 Louie had come to be with Mother Annie during the confinement and she stayed on to take care of the family. A year later she and Father were married, June fifth, 1889. Mother Louie had six children: Sarah Longstroth, who died at birth, Mary Joy her twin, Pauline, who died in infancy, Paul Snelgrove, Martha Snelgrove and Louie Gill. Martha and Louie Gill were always called "The Little Girls," because they were much younger than the rest of the children. Martha was born when Mother was forty-seven years old and Louie Gill was born three years later. It might be interesting to know that sister Alta and my cousin Louie Davidson, who lived with us, were married in 1905. Mother and the girls all had babies within three months of each other. Louie Gill has a nephew six weeks older than herself.

[†] Father retained his two hundred and fifteen acres of dry farm land and his one hundred sixty acres of mountain pasture land in Mendon.

Chapter 2: Childhood

As I mentioned before, our home was on an eighteen acre lot at 1935 South Ninth East[†]. On this little farm, we raised all kinds of fruits and vegetables. We had apples, pears, cherries, apricots, plums, red currants, yellow currants, black currants, raspberries, strawberries, cantaloupe, watermelons, carrots, beets, potatoes, corn, cucumbers, squash, tomatoes, lettuce, peas and other vegetables. Father raised winter watermelons which we stored in the hay loft under the hay to keep them from freezing. Usually we had our last watermelon on New Year's Day.

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We also raised horses, pigs, cows, rabbits, chickens, turkeys, and at times sheep and ducks. I loved the chickens best and enjoyed making the little lath coops for the hens and their new broods. I made an incubator once and kept it heated with our coal-oil camp stove. Although the little chicks pecked holes in the shells, they were not strong enough to break through. Years later when I was in Bingham, I made an incubator for premature babies and it proved very successful.

[†] In 1910 the old homestead was subdivided and at the present time five houses occupy our former front lawn. My sister Joy still lives in the old home on Hollywood Avenue.

Our home was practically self sustaining as far as food was concerned. We raised, canned, and dried our own fruit and vegetables, raised and butchered our own meat. The wheat from our farm in Cache Valley was ground into two kinds of flour, graham and white. This was put in fifty and one hundred-pound sacks and stored in large tin lined bins. We used about one and a half tons a year[†].

Preparing for the winter was an all-summer job. We dried apricots, peaches, apples and plums. The fruits with stones were washed and cut in half but the apples were peeled, and cored and each quarter was cut in half. We had peelers which turned by hand and were much faster than peeling with a knife. One of us children peeled while two or three cored and cut the apples. The fruit was picked and prepared while fresh.

262 The roof of Father's work shop had a slight slant and we spread sheets on it and laid the fruit out carefully by hand so no two pieces touched. Then we covered it with mosquito netting to protect it from the flies. Sizeable rocks were placed on the edges a few feet apart to prevent the sheets from blowing away. The fruit was allowed to dry in the sun for several days. How carefully we watched and if the slightest sprinkle of rain came, we scrambled up on the roof, picked the sheets up by the four corners and got our precious fruit under cover. When the skies were clear again, the sheets were taken back on the roof, and the fruit spread out once more and carefully covered with mosquito netting as before. It was amazing how many bushels of fresh fruit it took to fill one flour sack with the dried product.

Hundreds of jars of fruit, jellies, and pickles were put up during the summer and fall. Our jams, apple marmalade, catsup, and chili-sauce were made in a forty gallon brass kettle which was hung on a tripod over an open bonfire. We could handle

[†] Smith had a flour mill a little north of our place on Eighth East and he ground our wheat. This mill was later turned into a school. I attended the Old Mill School with Miss Libbie Edward as teacher. She was a wonderful person and a splendid teacher and she influenced my life and the lives of many others of her students.

three and one half bushels of fruit at a time and it took many hours to cook. Father made a stir stick with a long handle, which the children took turns operating. The fruit had to be stirred constantly. When we got a late start our job was completed by moonlight, or lantern light. Many times we were stirring at 12 o' clock at night. I took my turn while lying on a cot near the kettle. We stored our jams and pickles in five- and ten- gallon stone crocks. Our chili sauce and catsup were put in half-gallon glass jars.

As children, one of our most constant jobs in the summer and fall was picking up apples. About thirteen acres of our land was in apple trees and the rest was in alfalfa, nursery trees, a small fruit orchard, a garden space, and a large barn yard which was used as a play ground.

Father was very particular about spraying the fruit trees several times each spring and during the early summer. Nevertheless we had some wormy apples, and as they fell to the ground we picked them up and fed them to the animals. When we had a bad wind storm the ground would be covered with all kinds of apples. They were picked up and sorted. The real good ones we put in boxes to be sold as wind falls[†]. The more bruised ones went into the dump cart and were taken to the cider mill to be washed, ground and pressed. The badly bruised and very ripe ones were picked up and fed to the horses and pigs. Each child had to pick up a dump cart[‡] of apples before we had our recreation for the day, but it was fun. We raced each other to see who could get through first. We had apple fights and learned to throw fairly straight. Each one got a strong willowy stick about two or two and one half feet long and stuck it through an apple and then swung it around several times and let the apple go. Everyone ducked behind a tree when the apples began to fly. They were swift and really smarted when they hit. If we saw Father coming, all playing ceased and the boxes and cart were filled in a hurry.

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[†] We got about 25¢ a bushel for these.

[‡] The dump cart held about ten bushel.

In the fall we prepared for the winter by storing our potatoes (thirty to forty bushels) and carrots in the root cellar and picking winter pears and apples and storing them in the fruit cellars. We had two fruit cellars, a large one in the upper orchard and a smaller one under the granary near the house. The smaller one was for family use and the larger one for storing the apples which were for sale. This cellar was several hundred feet long and had large open bins one above the other. Years when the crop was good we stored about two thousand bushels of apples. It was quite a job to care for them as they had to be sorted every few weeks. As children, we all helped. Every box was carefully handled to see that no spotted apples were sold. The specked ones were taken to the house to be used in pies, puddings and fresh applesauce, which was a favorite with the whole family. We often sent some to the neighbors.

Pumpkins, squash and the like were stored in the hay barn.

264 The pigs were butchered and cut up. The sides for salt bacon were put in the salt bin. The hams and shoulders were sent to the smoke house to be cured and some were put in brine to be made into corned pork. The smaller pieces were put through the sausage mill for sausage, and some were saved for scrapple. From the head, Mother made head cheese.

Father did not kill the calves. He always sent them to the butcher to be dressed and cut up.

We stored our cooking eggs in water glass and we had enough dry yeast on our shelves to last all winter. Our sugar was purchased in one-hundred-pound sacks and we bought round twenty pound cheeses in wooden boxes. We got our milk from our own cows, and we raised plenty of chickens for our own use. Each week we churned our own butter.

As our family grew, the house grew with it. The original kitchen became the living room when Father added a dining room,

a kitchen, three bedrooms for the older boys, and a closed-in back porch where we kept our washing machine and ice box.

The north end of our hay barn was lined with saw dust and made into an ice house and in winter we stored ice for summer use. Mother made lots of ice cream and it was handy to have ice on the place. We had a six quart and a four quart freezer, and often she filled the two in one day. The children who turned the freezer had the privilege of licking the dash. I always did my share when I was well.

We had a large extension table in the kitchen and we all sat down together. The red checked cloth was very colorful and the silver caster with bell on top was the center piece, and at each place was a napkin encircled with a silver ring individually marked. At the end of the meal, each child folded his napkin and placed it back in the ring ready for the next repast.

Father sat at the head of the table with Mother on his right and Willard, our oldest brother, on the left; Preston and the others sat around according to age so that the youngest was next to Mother. The food was placed on the table in large bowls and the milk in a large white pitcher. The food was blessed and passed, each helping himself. Although we were allowed all we wanted to eat, Mother often said, "Don't let your eyes be bigger than your stomach because you know we believe in the gospel of the clean plate." We had to eat what we took or it was saved for the next meal. Nothing was wasted and we all learned it was better to have seconds than to overload our plates. There was no dessert until our meat and vegetables were eaten.

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Our meals were very orderly. "Please" and "thank you" were essentials in our home. We were encouraged to express ourselves, but each took his turn. If we got the giggles or raised our voices so as to cause confusion, Father rapped on the table with his knife handle and said, "If you can't

behave, please leave the table." We either behaved or left with no argument.

Ten were seated at our table each day until our cousins Louie, Clifton and Leon Davidson came to live with us, and then we had thirteen. If a friend dropped in, the chairs were pushed a little closer together, and another place was set. This was a frequent happening at our house. All were welcome. You might wonder how so many could be brought together for a meal. The old dinner bell took care of that. Approximately fifteen minutes before dinner was served, one of the children stood at the back door and rang the bell vigorously. The sound carried to most parts of the lot and no matter where we were or what we were doing, we all ran to the house and washed up in order to be ready to take our place at the table on time.

266 When we got older and were allowed to stray farther from home, the bell was replaced by a train rail about three feet long which was hung by wire from the limb of an old apple tree which grew at the side of the wash house[†]. This was struck with an iron rod about one inch in diameter and two feet long. We called it the gong and it could be heard for blocks. The neighbors always knew when it was dinner time at Uncle Willard's.

Much of our entertainment was of our own making. In the winter we played fox and geese in the snow. We rolled large snow balls and made snowmen that lasted for days. Pieces of coal were used for the eyes, ears, nose, mouth, and also for the buttons down the front. An old hat was placed on the head at various angles and we felt that a work of art had been completed. Often we divided into groups and competed with each other to see who could make the largest and best looking specimen.

We pulled one another around on the sled and did a lot of coasting. Skating on the old canal which was at the upper end of our lot was a favorite sport with us all. We could skate for miles. Since the water was shallow, if the ice gave way there was

[†]Later Father made our wash house into a play house for the little girls.

no danger. Father's instructions were to hurry home when the glow from the setting sun showed in the west and we rarely disobeyed.

Often Father would say on a Saturday morning, "Hurry, get your work done, and we'll hitch up and go down to the church farm pond for a skate." So, we were soon filling the bob sleigh with our friends and, with a big basket of lunch and the sleigh bells jingling merrily, we would drive several miles to a spot we all loved. Father and Uncle Alma Pratt usually accompanied us. They would build a bonfire on the edge of the pond so we could warm ourselves if we got cold. They taught us how to hold a blanket between two of us like a sail and let the wind carry us along over the ice., We loved to play pop the whip with Father or Uncle Alma on the end. It was such good healthful sport and so much fun.

In the summer we dammed up Parley's Creek, which ran through our place, and went swimming. We played run-sheep-run, stink-base, tippy, kick-the-can, steal sticks, hop scotch, purg, marbles, ball, jump rope, mumble peg and many other games. Our barn yard was the ball ground and marble center for the whole neighborhood. Boys came from all over Sugar House to play there. Many times Father counted forty and fifty boys on our lot. In those days the street car stopped at the front gate of each home and the car conductors called our place "Kid Town."

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Many windows were broken but Father replaced them with never a complaint. He was so happy to have his children at home and he welcomed all our friends. He was a very good disciplinarian and if any child on our lot failed to go when his parent called or sent for him, he was barred from coming over for one week. Any quarreling or rough talk was treated in the same manner.

Horseback riding was one of our sports. We all learned to ride when we were very young. The old granary steps, which were about four feet high, were the loading station. We stood on the little landing at the top of the steps and as the rider came in from his trip up the lane to the upper gate, he rode up close. As

he got off, the next rider got on. When the horse left with his precious load, the rest of the kids sat on the little platform and kicked their heels against the sides and sang songs and laughed. The waits were as much fun as the rides. I can close my eyes now and hear the rhythmic beat of the heels against the boards. Old Dolly was very tame and knew where she was to go. Oh but she seemed big, and I was such a long way from the ground when I climbed into the saddle!

My childhood memories would not be complete without mentioning the neighbors and relatives who lived near us. On the north was Daniel Kimball's family: Don Carlos, Ernest, Pearl (who died in childhood), Louis, Lester, Vivian (later called Charles), and Katie. Their ages corresponded quite closely to the ages of our family, from the oldest down to the younger children. My brother Preston and Ernest Kimball were especially close.

268 On the south we were fortunate in having Aunt Martha Davidson, Mother's sister, and her family. Aunt Martha died before my recollection. Uncle Willie tried to keep the family together, but being a sheep man was often away from home. In his absence the three children, Louie, Clifton and Leon, were under the guidance of our home and were considered part of our family.

Next to Uncle Willie's home on the south was that of Uncle Steve's (Dr. Stephen L. Richards) and family. The children were Stephen L. (now First Counselor to the President of the Mormon Church), Alice, who died in young womanhood, Claude, Gill, Stayner, Willard, Russell and Grace. The age brackets of that family fairly well matched the age brackets of ours.

We grew up with these three families and were very closely knit together with strong bonds of affection and interests. Mrs. Kimball died when I was quite small and Mother took that family under her wing, so to speak, until Mr. Kimball married again.

Looking back on my association with these friends and relatives, I am faced with the fact that illness definitely

handicapped me in trying to keep up with the group either educationally, physically, playwise, or from any angle. I think this was the beginning of an inferiority complex that made me feel I did not have the capacity to compete with children of my own age. This feeling extended into my young manhood, when some of my professors and colleagues helped me to gain confidence in myself and gradually I was freed from a state of depression which had been brought about by the concept of these inequalities.

As I recall the life of these four families, I realize we were always very congenial. There were never any jealousies, and there was free participation in the activities of all. Our home was usually the place of gathering for pleasure as well as for other activities. The two boys in the Kimball family who were in my age bracket were Lester and Charles. I had the privilege of being on a mission for the Church in Scotland with Charles. We labored together for one year and I found him to be a very fine young man and a stalwart friend and companion.

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In Uncle Steve's family, Russell was near my age and he was a great favorite with me. He was mechanically minded and very clever at making things. I longed to be able to accomplish as he did.

Leon and Cliff Davidson were always very close as play mates as well as in family relationship. I always appreciated the part they played in my life. When financial difficulties overtook their family and they lost their home, Father invited them to move into the old Orchard House. Cliff and his father lived there until Uncle Willie's death in April (1908). Louie married Joe Laird in 1905 and moved to Dubois, Idaho, taking Leon with her.

Orchard House

The old Orchard House was built in the early nineties by a Mr. Hall. It was located in the center of our orchard and when he

moved away, it became a great rendezvous for many people. When we were small children Mother planned our parties there and with the aid of our old hand organ we danced and had lots of good times. As we grew older, it was used as a club house. My older brothers formed a club called the B. H. Roberts Debating Society. They met regularly and gained good experience and intellectual development.

When an epidemic of scarlet fever broke out at home, those of us who did not have the disease were shipped off to the old Orchard House. I remember how cold and barnlike it was when we came home from school with no fires. We heated it with small stoves that would not maintain a fire all day. But when we assembled after school and got the fires going, warmth and cheer soon returned and we had some very good times in our exile.

270 One of the most interesting things about the Orchard House was the big grate in the large room. It was made of copper and had a small warming oven on each side. When the grate was well fired we could put out the lights and the fire was sufficient to illuminate the whole room. This grate is in the collection of the Sons of the Utah Pioneers.

The next room on the south was the old conservatory or hot house all constructed of glass. It had a heating system with hot water pipes running beneath the flower beds. While this was never in operation during my recollection, it was an intriguing place to me and gave me a great desire to have a hot house in connection with a home. I always felt that it would be wonderful to have a place connected with my bedroom so when I couldn't sleep I could get up and go to gardening. This desire has remained with me through the years but has never been realized.

When I look back and think of all those windows in a vacant house, it is amazing that practically none of them were ever broken. I do not believe that could happen today.

Certainly the Halloween parties held in the fall of the year were among the most outstanding memories of the old. Orchard House. One group would decorate and fix the place up and then often four or five other groups would proceed to plan parties. Sometimes people got their dates mixed and attended the wrong shindig. Very funny things happened on those occasions and we had some good laughs.

We placed jack-o-lanterns from Ninth East to our fun house which was over a block away and back among the trees. Ghosts and goblins lurked behind the tree trunks and corn stalks were placed in various positions. We really had a band of ghosts and goblins and a collection of unique features to create surprises.

I shall never forget one party we gave when I was in high school. Our whole class was there. We had a ladder going up the east wall and then one going up the east gable of the roof. Witches and elves nipped at the legs of the guests as they ascended. On the top by the chimney was a fair sized platform where two ghosts stood. They seized each victim, sat him in a large pan and pushed him down the other slope of the roof. He had no idea where he was going to land. With a jerk on the rope which was tied to the handle of the pan out went the occupant and he landed on a flat pebble roof. The squeals were hilarious and the moans of those coming up the ladder were apprehensive. From this roof they climbed down a ladder to the ground and then through a low window into the kitchen directly under the flat roof. This room was dark and had been fixed up as a witches den with all kinds of slimy things which were passed around from person to person.

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Between the kitchen and dining room were three steps. A barrel with both ends out was placed in the doorway at the top of the steps and everyone had to crawl through this to get into the party. When the guests were nearly through, two ghosts took them by the hands to help them to their feet and a mild electric shock went through their whole body. The laughter and squealing were equal to that heard on a roller coaster in any amusement park.

The night we had our party one of the ladies from the Pleasant Hour Club group got the dates mixed and she joined us. She was quite large and when going through the barrel she got stuck. We couldn't get her forward or backward. Every time the ghosts took hold of her hands, she gave a terrible scream. It took some time to extricate her. I am sure the kids attending that party will never forget it. It was the talk of the school for many weeks.

The old house was torn down in 1911 by my brother-in-law, Alf Gunderson, on his return from a mission to England. He used the lumber to build a home for my sister Alta.

272 One of the most cherished spots in my memory is our canyon home. Father bought eighty acres of land up Smith's Fork, just off Parley's Canyon. In the early days we called the place "The Old Arm Chair." It was named for a large rock formation on the top of the mountain which looked like a grandfather's chair. Now the canyon is called "Mount Air." Our land was approximately two miles from the main road in Parley's canyon and the first year or two we left our wagon at the mouth of Smith's Fork and all walked the two miles except Mother. She rode one of the horses and our food, bedding and clothes were packed back of her saddle and on the other horse. Each child carried a small package or bundle and that few pounds became exceedingly heavy before we reached our destination.

At first we went to Uncle Alma Pratt's dugout but when the road was fixed and became usable for wagons, Father built a log cabin. Uncle Alma and the boys helped him. Mother felled the first log. Willard chopped the tree almost through and Mother completed it. The log was marked by carving August 1898 in the bark.

As children we loved to show Mother's log to our canyon guests. The cabin was completed in 1899. It was fourteen-feet wide by twenty feet long and it had a dirt roof. We had lots of good times in our primitive home.

A few years later Father and Willard B. took down Grandma Longstroth's old home on Richard's Street in sections and set it up on a canyon lot near our log cabin. A kitchen, dining room, and screen porches were added and we called it "The Big Cottage." It still stands.

Our friends all loved to go to the canyon and we took turns having our particular crowd up for a weekend of fun and recreation. There were certain rules we had to follow; all had to stay together. There was no slipping away from the crowd. If this rule was disobeyed, the ones who would not conform were disqualified for another invitation to our canyon home. Moonlight walks and climbs were a favorite sport. We always had an older person who knew the trail with us. It would have been so easy to get lost in the dense underbrush.

We often arrived back at the cottage with the soles of our shoes tied on with string, elastics, a handkerchief or anything we happened to have with us. Looking back, I wonder how Mother and Father managed to be so calm and good natured.

Chapter 3: Childhood Problems and Experiences

274 In my youth I had two great obstacles confronting me, poor health and stammering. I could not complete a whole sentence with ease. The stammering was finally overcome when I was twenty years old and on my mission in Scotland.

The doctors called my sickness inflammatory rheumatism. Red spots appeared all over the lower part of my body. Sometimes they would extend as high as my arm pits. These were accompanied by sore throat, fever, chills and bloody urine. Such spells confined me to my bed for six and eight weeks at a time. I had siege after siege for several years, which resulted in loss of school. This made me feel insecure and gave me a great inferiority complex and a feeling that I could not compete with other kids my own age. The only security and encouragement I had was received from my Mother and the wonderful cooperation of my whole family. They looked out for me and did whatever they could to help. Uncle Steve Richards, our doctor, was also a pillar of strength. He was wonderful and did all he could in a medical way.

We were all taught to work and after a bad sick spell, I couldn't do heavy work outside so I stayed in the house with Mother. She taught me to iron, dust, sew on buttons, cook, churn, make bread and do all the indoor fundamentals. Then as

I got stronger, Father took me out with him and taught me all the outdoor fundamentals. I learned how to half-sole shoes and put heels on. In woodwork I was taught how to shingle and mend roofs, put up shelves and partitions, mend fences and put on additions to sheds. Father helped us make our toys such as wagons, sleds, stilts and the like. I was taught gardening and how to prepare the soil, plant the vegetables, water and harvest them. I learned how to transplant trees, prune, spray, bud and graft and take care of fruit trees, how to harvest and store fruit and make apple cider and vinegar and store them.

Father taught us blacksmithing at his old forge. We boys could shoe horses, make chains, form hooks and eyes for fastening the barn doors, take the rims from the wheels of the buggies and wagons and reset them. We could mend and make parts of the harness. We knew how to care for farm equipment. The wheels of our rigs were covered with burlap and kept wet in summer to prevent them from falling apart and the rigs were protected in the winter by putting them in the sheds away from the rain and snow.

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Father's extreme good judgment of animals and his love for them gave us boys an intense interest in live stock. We were taught how to judge animals, how to breed them and how to care for them when sick.

I remember one day Mother and I were home alone and the cow got in the lucerne patch and became bloated. I led her down to the barn yard and called Mother. In those days the method of treatment was to stick the cow and let the gas out. Neither of us wanted to do it. We had to get the knife in a certain spot. Mother said, "I'll hold the knife and you push it in." We did our best but poor bossy died. We all mourned her loss. Our animals were almost like members of our family.

I am impressed with our attitude toward sex. We learned it in a natural way through the mating of our animals and chickens on the farm and through the cross pollinization of our fruit trees and flowers. It seemed just a part of life and sex was never a great source of curiosity to me. The most outstanding

memories of my youth are the practical things my father and mother taught me and the great love and understanding they had for the needs of childhood and youth.

Willard's Influence

In reminiscing I recall what my brother Willard has done for me. He taught me a pattern of life that has enabled me to accomplish things all through the years. When I drove a team for him, we always did more work than the other teamsters. If they hauled three loads of gravel, we hauled four. If they went to work at eight o'clock, we went at six. We always did more work than the average man. Not that I was above the average, because I wasn't, but my capacity was greater because I worked harder. An average man can accomplish anything if he will put forth enough effort. He will accomplish more than a brilliant man who puts forth less effort, but an average man can never overtake a brilliant man who puts forth the same amount of effort. Work was no trial to me. I loved it. It brought me the joy of accomplishment and established for me the pattern of life that brought forth results in whatever line I cared to put my efforts.

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As an intern, I always had my patient fully prepared for the staff man when he arrived, no matter what time of day or night he came. All preliminary tests were completed and all necessary information tabulated. Many of the doctors commented on what a help this procedure was to them, and the habit I formed was invaluable to me.

Willard taught me systematic effort. He was like a father to me.

Peddling Apples

When I was very young my older brothers, Willard, Preston and Briskie, peddled apples allover town. The fruit was picked, put in bushel boxes, packed in the old white top and covered

with a canvas in the evening. This was done in order to get an early start the following morning. The boys had their breakfast, hooked up the team and were on their way by six a.m., thus arriving in the section of town where they intended to work, by seven o'clock. One of the boys stayed with the wagon while the others knocked at the door of each house and tried to sell the apples they carried bushel boxes and half-bushel, peck and half-peck measures.

When I was well enough, they often took me with them. This was an interesting experience. The consideration given their very youthful brother in his difficulties was amazing. At first I stayed with the wagon and when fatigue overtook me, I crawled into a bushel box and went to sleep. That I remember very vividly.

Later I was allowed to peddle. The boys taught me how to present myself in an endeavor to make a sale as I went from door to door. Learning to approach people was hard for me but it helped in later life.

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One of the fond memories of peddling was going to the old cracker factory and purchasing ten cents worth of broken crackers, which with a piece of cheese and a few apples comprised our lunch.

I remember well the old watering trough at the south-west corner of Liberty Park. The flowing well kept it full at all times and on our way home we always stopped and watered the horses.

Years later when I was in Bingham, these memories were recalled. In about 1944 I operated on the wife of Judge Straup for an abscessed gall bladder. Following the operation she became very toxic and delirious. On the third day, as I entered her room she stared at me with a semi-delirious expression and said, "Those eyes look exactly like the eyes of a little boy who used to peddle apples to me." She had never mentioned this before but in the semi-consciousness of her delirium she had recognized me. I had knocked at her door many times in the early nineteen hundreds.

Chapter 4: My Mission

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My sickness had kept me out of school a great deal. Some winters I spent in California and my schooling was nil. At the age of nineteen I had completed less than two years of high school. My grades were very mediocre. At this time the church called me on a mission. Uncle Steve and Dr. Gill objected to my going on account of my health, but Mother said, "I want him to have a mission and if the Lord wants to take him, I will feel all right about it." In 1911 my cousin, Steve Wilcox, and I left for Europe. Steve went to England and I was sent to Scotland.

My progress was quite rapid. I studied hard and my close association with the other Elders helped me to feel one of the group. The inferiority complex began to lessen and my stammering was completely overcome. Then came a bad epidemic of diphtheria. I was stricken. The ambulance that took me to the Edinburgh infirmary had three tiers of bunks. I laid in the upper bunk for six weeks in very serious condition. The doctors gave me no hope and said if I lived they were sure I would be an invalid all the rest of my life.

I was thousands of miles from home and faced with the defeatism of death. I was twenty years of age and the doctors

declared my life to be close to an end. I was very weak, sick at heart and discouraged. My appetite was gone and life seemed very uncertain.

Steve heard of my plight and came to Scotland at his own expense and took me to Mission Headquarters at 295 Edge Lane, Liverpool. Rudger Clawson was Mission President. He put me to bed and called in Elder Ezra Taft Benson, Sr., to help administer to me. As I lay in bed, the President came to me and said, "My boy, I'm going to prescribe for you." He bought a bottle of Port wine and gave me a small glass full several times a day. I began to eat a little and gain in strength. At the end of two weeks, I was carried to the ship on a stretcher and I set sail for home accompanied by two missionaries to care for me.

We sailed on the Lusitania and had been out of port only a few days when a bad storm came up. We were locked in the hold for five days. My companions were so seasick they could do nothing for me. The air in our bunk room became foul and the stench was so sickening I made up my mind to get out of there. With great effort I dressed, and, by holding on to the wall and railing, groped my way to the dining room. From then on, I began to get better. The ocean air seemed to give me strength and my appetite increased. When we reached New York, I walked off the boat by myself. That was the first real walking I had done in over three months. My weight was less than one hundred pounds.

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President J. Reuben Clark, Jr. was Solicitor of the State Department at this time and my brother Preston was his assistant. Preston came up from Washington, D.C. and met me at the boat. He took me to see Doctor Harlow Brooks, who was a good friend of my cousins, Doctors Gill and Ralph Richards. I spent several days with the doctor and he gave me a thorough examination. I told him of my great discouragement. He looked at me and said, "Do you want to live?" I answered, "Yes, I want to live very much and I want to do something in life." He asked, "What do you want to do?" I told him, "Go back on the farm. It is the only thing I know."

He said that my physical condition was such that hard farm work was out but he said, "I have looked up our school records and find that five of your family have gone through this school and made good doctors. Why don't you go into medicine?"

I told him I had had no education, but he said, "You have to take it easy physically for several years and if you apply yourself, you can catch up." Doctor Harlow Brooks was the first man to give me real encouragement toward a professional life.

Preston took me to Washington, D. C. where I spent six weeks with him and his wife, Barbara. Before starting west I went to New York to see Doctor Brooks again. He found that my condition had improved substantially, but he said, "Your tonsils must come out as soon as possible." I now weighed one hundred and twelve pounds.

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Soon after I arrived home, Doctor Gill arranged to have my tonsils out. A few weeks before, our sister Joy had had a similar operation and she had nearly died of a hemorrhage. Thinking our family might be bleeders, the doctor gave me three shots of serum to help coagulate my blood. After the third shot, hives broke out all over my body. They were the largest I have ever seen, some being as big as my hand. I was literally covered. They were on my body, arms, legs, between my fingers and toes, in my mouth, ears, hair and on my eyelids. No part of my body was untouched by them. The family was at our canyon home in Mt. Air. Ann and I were home alone. She called our doctor, Uncle Steve, and he told her to put me in a fairly warm soda bath. I collapsed. My heart wouldn't stand it, so he had Ann wring out a sheet in lukewarm vinegar water and wrap me in it. That gave me relief and to this day I recommend vinegar for hives.

My tonsils were taken out later in the summer. My health improved markedly.

Chapter 5: Schooling

In the fall of 1913, I went up to the L.D.S. College and talked with Brother Frank Seegmiller about getting back in school. He looked up my record and found it very poor, but my mission record had been good so he gave me credit for two full years of high school. I was twenty-one years old and to think of attending classes with young high school students did not help my morale. Brother Seegmiller suggested that Doctor Howard Driggs at the normal school of the University of Utah might help me. Many older students attended there. Doctor Driggs was very kind and became a close friend and adviser to me throughout the years.

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At the University, I found it was possible to keep up with the group by working hard and applying myself. My self-confidence began to return. One of my first experiences to illustrate this was in a botany class. Doctor Twiss told us to draw a starch grain. I had an inferiority complex in drawing because of an experience I had had in one of the lower grades. Mr. Sheets, our teacher, placed a stuffed duck before us and told us to draw it. I couldn't make a drawing that looked like a duck and told him so. He kept me in and insisted that I draw. I sat there until my sister Joy, unbeknown to the teacher,

slipped in and drew it for me. From then on, drawing was an impossibility as far as I was concerned.

I told Doctor Twiss I couldn't draw. He had me look in the microscope and said all you have to do is to make a few marks like this. His drawing looked very much like a grain of starch. I asked him to show me again and he drew it the second time. With this help I was able to complete my drawing. By the end of the course, the class had been assigned one hundred and fifty drawings. Mine were chosen as the best in the class and were sent east to compete in a national contest. They placed fourth in the nation. My feeling of being able to compete was strengthened.

Then one day in math class, Doctor Pherson put some propositions on the board and turned to the class and said, "Anyone who can work this first proposition will be excused from the examination." The solution just came to me and I said, "I can work that one in my head." I outlined the solution for him and was excused from taking the exam.

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I had taken chemistry every year while at the University. In the last year, as we walked into our chemistry examination, Doctor Bonner announced that Paul Richards and Robert Ogilvie would be excused from taking the test. These experiences gave me more confidence and my inferiority complex began to weaken.

Doctor Snoddy was a big help to me. He taught psychology and was very interested in psychoanalysis. One day he asked if he might psychoanalyze me. After the analysis, he told me I had one big difficulty and that was fear of failure. He lent me several books on this subject. I read them and reported back to him. For this I received credit.

Doctor William Stewart, who was head of the normal school, wanted to establish a department of agriculture. Through his efforts, the University brought out a young man from the East, Doctor Stiever, and we two became very companionable. He also allowed me to take courses on the side and get extra credit.

Doctor Joseph Merrill, who was a professor at the University, lived near us. He used to walk to and from school and often I would join him as he was going home. From his conversations and answers to my many questions, I gained a very gratifying fund of general information.

Sometimes I walked home with Doctor Byron Cummings. My visits with him increased my knowledge of history and archeology. He wanted me to join his summer archeology expeditions, but my health would not permit. Then, too, I felt that the summer courses were important to further my studies.

More than anything else my association with these men helped me to gain confidence in myself[†]. I applied for admission to Harvard, Columbia and Johns Hopkins and was accepted at all three universities without an A.B. degree because of my high scholastic record. I had seen both Johns Hopkins and Columbia Medical Schools. I felt that they were rather run down; so when Harvard sent me a picture of five beautiful new white marble medical buildings, I decided on Harvard.

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The atmosphere of New England and all the historical facts concerning Boston and Vicinity that I had read about made me feel that outside of school, Boston had much to offer. I was not disappointed.

I married Ethel Bennion September 7, 1916 and we left for Boston a few days later.

[†] With this encouragement and help, Paul was able to complete his high school and get all but six credits for a B.A. degree in three years time. He went into normal school the same year that his classmates went into college and he got out of the University one year ahead of them. As Doctor Brooks had predicted, Paul caught up with his class and he made a straight "A" grade.

Chapter 6: Boston

Soon after arriving in Boston we met the Robisons. Rulon was at the New England Conservatory of Music, and Claire, his wife, had been a classmate of Ethel's at the University of Utah.

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After locating ourselves, which took about one week, we still had, a few days before starting at the medical school and we spent this time with the Robisons in sight-seeing. We went to Marblehead, an old town just a short distance north of Boston. One of the great attractions there was a formation in the rocks called "The Churn." It was a high, jagged v-shaped structure, and as high tide came in, the water spouted up some twenty or thirty feet above the surface. Then it fell back and rushed out into the ocean. This phenomenon was repeated with each wave as it rolled in. As I bent over the rim to look down into this chasm, my wallet containing five hundred dollars in gold and green backs dropped out of my pocket and onto a ledge some fifteen or twenty feet below. I could see it lying there. Each time the water came in, my wallet was pushed up and as the water returned, it was deposited on the ledge again. I thought I could see the wallet in the flow of water as it spouted up and I said to Ethel, "Take hold of my hand and hold on tightly. Maybe I can catch it as it falls back." We did this and I

stretched out my hand into the water and retrieved my treasure. At that time five hundred dollars was a volume of money and it meant a great deal to a poor lad just starting in medical school. This was one of the most exciting moments of my life.

We visited the north end of Boston and saw Paul Revere's home, the Old North Church, Cop's Hill, Cemetery, and Louisa May Alcott's home. We traversed the route of Paul Revere's famous ride from Boston into Concord. There we became acquainted with the Old Concord Bridge, Walden Pond, the homes of Thoreau and several other poets and writers.

We visited the sight of the original old grape vine. It was still growing and apparently strong and healthy. On our return to Boston, we went through Cambridge and walked along the banks of the Charles River, saw the old Longfellow home and the Great Elm under which George Washington took command of the Colonial armies at the beginning of the Revolutionary War.

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This all helped me to form a solid foundation and gain an understanding of the patriotic fervor which is a necessary part of every good American. It established in us a knowledge of these places and an absorbing interpretation of the spirit that exists there. This general introduction to Boston gave us a pattern which we used on many occasions. We took visiting friends over the same areas.

The repetition of seeing these places which have played such an important part in our American history impressed upon me the need of being a stalwart American and a defender of the principles for which our fathers fought. It gave me a sense of responsibility. They established a nation with many liberties for us and it is our duty to see that these principles are maintained. In other words, it is not what democracy does for us but what are we willing to do to keep democracy on the proper plane and level.

From September, 1916, to the present day our associations with the Robisons has been very friendly and close. We spent six years with them in Boston and seldom a day went by that we did not contact them. Friday afternoons about five o'clock, all four of us walked from Back Bay district to old Fanuel Hall, which was the marketing place at that time. There we purchased our supply of vegetables, meats and groceries for the entire week. In our utter economy, Rule and I put the girls on the street car with the groceries. They returned home for a fare of five cents each and we walked back a distance of four and one-half miles.

My feelings of insecurity popped up again at Harvard. Early in my first year, I had to prepare a paper in anatomy for Doctor John Warren. It came back with a "C" mark and a little note saying, "Be glad to see you. Bring your paper." I went to his office with fear and trembling, for he was a very aristocratic man. His people were Bostonian plutocrats. He asked me to sit down. Looking at me very kindly, he asked, "What do you think of the mark I gave you?"

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I answered, "Well, Doctor, you did not dot an 'i' cross a 't' or correct a misspelled word, so it is hard to understand." Like my father, I was a good penman in those days and my paper was extremely neat.

"Have you ever been bothered with the feeling of a lack of security?" he asked.

I told him of my handicap and he talked to me for one and a half hours. As I sat there he said, "You are an impressive young man. You have fine features and a high degree of sincerity. With a mind of conviction you should go a great way in the world." He gave me a lot of good fatherly advice and as I left he said "Well, my boy, let me tell you one more thing. Learn to go through the world holding your head up and feeling that you are as good as any man you meet. You can be better if you will apply yourself."

I felt most fortunate to have had such a wonderful home life and to have met such a great man, who would pause in this busy world and take an interest in a kid who had no confidence in himself. It was amazing to me that he could sense my great insecurity by reading only one paper which I had prepared.

From this interview I took greater courage and determination and went through medical school establishing for myself a very good record, one of which I have always been proud.

Early in the spring of 1920 I transferred six of my surplus first year credits from Harvard to the University of Utah in order to complete my graduation there. Preston arranged for me to get my A.B. degree from that institution.

On May 20, 1920 Mother and Ethel used the two tickets allotted me and attended the graduation exercises on Harvard campus at Cambridge. This was a very eventful day for me. Fear of failure had played such a terrible part in my life but now I had obtained a degree from Harvard, and thus had proved my ability to myself, my wife and my mother. I knew Mother was very proud of me. I have never seen her face more radiant and filled with such complete communication of joy to me as I saw that morning when I passed her in the side lines during the graduation march. After the exercises were over, Mother spoke many times of the joy she had received from hearing President Eliot's Baccalaureate address. His life had meant much to Mother because of his literary background and his compiling of the great books which she enjoyed throughout her adult life†. She also expressed satisfaction to me for the fact that I was one of the thirty students out of a class of one hundred twenty-five who had graduated without a mark of any type against him. This gave me more confidence in myself.

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Harvard afforded me other associations which have been a great contributing factor in my life. Very early I learned that we are only composites of the individuals we meet. From

† Harvard Classics: "Dr. Eliot's Five-foot Shelf of Books"

the qualities we find in others, we tend to pattern our own lives as much as our abilities will permit toward that which we most admire in them. Such men - Doctor Harvey Cushing, the so-called Father of Brain Surgery, Doctor W. P. Graves, an outstanding gynecologist, and Doctor Frank Pemberton, who worked with Doctor Graves, Doctor Newell, professor of obstetrics, and Doctor Lovett, orthopedist at the Children's Hospital are all great men in their fields. I admire them and I am grateful for their encouragement. My admiration for them today has increased enormously because I realize what their wonderful contribution to my life has really meant to me.

As I look back on our life at Harvard, I think of a lot of hard work and satisfaction. Our first daughter, Lenore, was born there December 11, 1917, and, she has been a great joy in my life. I also think of the life-long friends we made. Rulon Robison, who was at the New England Conservatory of Music, and his wife, Claire, became very close to us. Aunt Edna Wells Sloane and her son, Lawrence, Mr. and Mrs. Val Hoyt, Dr. Lewis Viko, Dr. Cyril Callister and his wife, Vera, Dr. Howard Anderson, and Dr. Fred Wilcox, the Bootles, the Marshalls, and Mr. and Mrs. E. E. Bourne were all very dear to us.

Chapter 7: Hospital Experience

I had completed medical school in three years. My fourth year, 1919-1920, and the summer of 1920 I spent in surgery at the Peter Bent Brigham Hospital. As general practice seemed very important to me, I spent a year at Cincinnati General, 1920-1921, and then returned to Boston and spent six months at the Boston Lying-In Hospital, and six months at the Free Hospital for Women in Brookline. I was graduated from both.

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Mother had played a very important part in my life. That fact, along with the love, care and cooperation of my sisters had made of me a woman worshipper. To me, women were wonderful. In Boston two more women were added to my list of those who influenced me - Miss Louise Zutter, super-intendent of the Boston Lying-In Hospital and Miss Ewing (we called her Ma Ewing), superintendent of the Free Hospital for Women in Brookline.

Both of these women took me into their confidence and gave me a great many responsibilities not common to a house officer. They gave me an insight into the administrative part of hospital work. I was given access to all the records of the meetings of the Board of Trustees where the policies of the

institution were formed. All the financial records dealing with cost, purchasing, personnel and details in every day procedures were available to me.

Miss Ewing was one of the most efficient hospital operators I have ever known. I met her each morning at five minutes to four and we surveyed the hospital from every aspect. We made a thorough inspection of the laboratories, nurses' dwellings, kitchen, dining rooms and stock rooms; and we visited every patient in the wards. The hospital had a capacity of two hundred beds. In good weather we made an inspection of the grounds. This was all accomplished in one and one-half hours. We reported for breakfast at five-thirty, and surgery began each morning at six.

I had had a similar contact with Miss Sutter in the fall of 1921, although we were not so thorough. It was, however, a good preliminary for Miss Ewing's routine.

290 While at the Free Hospital for Women, I was given the responsibility of working out the technique of radium treatment for cancer of the cervix and uterus. Dr. Graves, who was the gynecologist of that institution, sent me to New York and Philadelphia for a week to observe the methods used there. On my return he asked me, "Do you know how to use it?" My answer was, "I do not know how to use it but I sure learned how not to use it."

I had seen many perforations of the bladder and rectum from the use of radium. They ranged from the size of a pea to the size of a ping pong ball. This was proof to me that the radium was not under control and that the rectum and bladder were not sufficiently packed away and protected from the source of radiation. My job was to determine how to keep the radium absolutely in place and to get the rays on the parts where they were needed. I conceived the idea of a round non-irritating disc, on the surface of which could be placed four capsules of radium. It occurred to me to use a

silver dollar. I had one in my pocket, which I had carried since 1913, calling it my good luck piece. On my twenty-first birthday, in the chemistry laboratory at the University of Utah, I had covered this dollar with paraffin, written November 25, 1913 through the paraffin and treated it with nitric acid, thus etching the date on my good luck dollar. I took this to the machine shop, marked the center and drilled a hole which admitted a size twenty French catheter. Two long capsules of radium were placed in the tip of the catheter and slipped through the hole in the dollar so as to protrude two inches. On one side of the dollar were clipped four capsules of radium forming a square with the catheter in the center. The dollar, with tiny holes drilled around the edge, was then sewed to the cervix, with the catheter extending up into the uterus and the radium capsules on the cervix. This placed the radiation where it was needed and we never got a hole in either bladder or rectum. The instruments used today are based on this principle. Dr. Graves said, "It would take a man from the West to think of that because no one else would have a silver dollar."

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I did a great deal of experimenting with radium, sometimes working four and five hours a day and I always used a live capsule. It didn't occur to me to use a dummy, thus protecting myself from radiation.

At this time all X-ray tubes were gas tubes and were not shielded, thus exposing the operator to a great deal of radiation. Dr. Brown, who was the radiologist, had a laboratory in his office at the hospital and I spent a great deal of time working with him. His work was confined to fluoroscopy of, the heart, lungs and the gastro-intestinal tract. He had already lost a number of fingers but felt that the improved machines had eliminated the danger. That assumption proved to be false.

While in Boston I experienced two severe epidemics. Infantile paralysis was considered a disease of childhood, but in 1917

when the epidemic struck Boston, many adults were stricken, some seventy years of age. It was at this time that the disease lost the name of infantile paralysis and took on the name of anterior polio myelitis.

Then in 1918 came the terrible epidemic of influenza. I have no particular reason for emphasizing this except for the fact that it was the first time in my life that I met death in large proportions. Frequently I pronounced eight or ten people dead in one day. This was a great tragedy to me, as I felt that death was the acknowledgment of the problem which had faced me most severely in life - and that was failure.

I recall very vividly that the first twenty or thirty deaths which occurred within a short time threw me into such a state of depression that I was forced to develop some type of philosophy to bring me out of that submerged condition. This was probably one of the greatest accomplishments I have ever attained. At this time I realized that the only way to face life is to do the best one can in any situation and then accept the results. This philosophy has helped me through many serious problems.

Chapter 8: Home Again

During my residency at the Boston Lying-In Hospital, we purchased an old one-seated Model-T Ford to help me in my district work. This work consisted of visiting and checking on the obstetrical patients who had been delivered by the students of the Harvard Medical School. Since each man was required to deliver at least ten babies before he could receive his diploma, this responsibility was very important. I had taken special interest in obstetrics and at the conclusion of my medical education, I had delivered more babies than any doctor who had ever been graduated from Harvard. As I recall, the number was ninety-two.

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It was in September 1922 that we packed all our personal belongings into our little Ford and started out. It was our desire to visit some of the places of early Mormon history and other points of interest before heading west. We went up to South Royalton, Vermont, and saw the birthplace of the Prophet Joseph Smith. We then turned south over the Mohawk trail and drove through the northern Adirondacks.

At Saranac Lake we met the Robisons in their remodeled Ford and toured part of the country with them. They returned to

Boston and we turned westward, up the St. Lawrence, through the Thousand Island district and into Niagara, then down to Palmyra.

We visited the old Smith farm, where Joseph received his first visitation, and the Hill Cumorah, where he obtained the plates containing the Book of Mormon. From there we went to Nauvoo and saw the old homes of Grandfather (Dr. Willard Richards), Brigham Young, John Taylor, Joseph Smith, Heber C. Kimball, and many others of the Church authorities. We also visited the old farms of John and Samuel Bennion and after hunting around, we located the old Nauvoo cemetery and saw the grave of Jennetta Richards, Grandfather's first wife. We found the headstones to be quite elaborate. Some were very beautiful.

294 That night we stayed at a little old hotel and became acquainted with the innkeeper. His father had ransacked the Mormon homes and boxed up many of the things left behind by the Mormon people when they migrated westward. We had the opportunity of going over some of these old relics and we found the lock of the front door of Grandpa Richards' home. It could have been purchased for twenty-five dollars but we didn't have the money.

We crossed the Mississippi at Keokuk, turned northward and followed the old Mormon trail to Winter Quarters, now called Florence. (It was here that my Father was born January 25, 1847.) We located a man who had lived there all his life. He knew the town and its history very well and took us to the old cemetery, which we never could have found by ourselves because it was so overgrown with foliage of the sumac type. Lenore, our five-year old daughter, insisted that she explore with me. I took her on my back and spent forty-five minutes wandering through the dense brush. We located many headstones. These stones were quite simple and a great contrast to the ones at Nauvoo. When we got back to the car, our clothes were torn and our arms and legs were bleeding.

We also visited the site where the three trees - Faith, Hope and Charity - were planted. Charity was the only one still standing. From here we followed the Mormon trail westward.

When we entered the Red Desert, Sweetwater County, Wyoming, the rear axle of our car broke. I walked into Granger, a small town twelve miles away, and got a mechanic. We took out the rear end of the car and he took it and my family into town. I stayed with the car until he returned. That period of three days and three nights spent in the desert alone was the most lonesome time I have ever known. I was impressed with the inquisitiveness of the coyotes. The place seemed to be alive with them at night. Their howls were so mournful and they came so close that I could see the glitter in their eyes. The day was spent gathering sage brush so I could have a fire burning at night to keep warm. I felt the cold after the extreme heat of the day. A few cars passed me, but none stopped and I spoke to no one for three days. I drank water from the radiator to quench my thirst. About 5 p.m. of the third day, the garage man returned with a new rear axle we put it in and returned to Granger before dark.

Ethel and Lenore had gone to a little cheap hotel. The money we had phoned home for arrived, so we paid our bills at the garage and hotel and went out to the public campground which was in a cow pasture beside a little stream. Several other families were there camping. We cooked our meal, prepared our beds, and settled down for the night. It was very chilly.

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About daybreak two or three big old steers came wandering into camp. One of them practically licked my face. I could feel his breath and I sat up with a start and said "Shoo." That started a stampede. Those steers turned and ran down the pasture at full speed. One went right through the tent of our neighboring tourist and carried the tent with him. The woman screamed, which made them run faster than ever. It happened that the parents were on one side of the tent and the two children on the other side and the animal ran between the beds, so no one was hurt. Ethel and I laughed and laughed. It is one of the best laughs I have ever had. To see that little tent about six by eight feet wrapped around a big steer that weighed a ton was really a funny sight. It scarcely made a good jacket for him. Our group was somewhat depressed, however, when we recovered the tent because it was riddled to pieces.

We arrived in Salt Lake October 6, 1922. A few minutes after our arrival, Mother said, "Dr. Tyree wants you to phone him." When I gave him a ring, he said, "Paul, Dr. Straup is here in the hospital very ill and he is worrying about his practice and hospital in Bingham. Would you go out and take over for him for a few months? I can't pull him out of this unless he gets his mind at rest."

Next morning I went to the hospital to see Dr. Straup, and I agreed to go to Bingham and look after his affairs for six months at two hundred dollars a month. He gave me a little advance on my wages and I made arrangements for Ethel and Lenore to stay with Aunt Lizzie Panter and Father drove me out to Bingham on October 7, 1922.

Chapter 9: Twenty-six Years in Bingham

Bingham was a real challenge to me. I had been there once as a small boy and I noted that its appearance was practically the same. The old cable tramway ran through the town and part of the old boardwalks were still in use. This mining community certainly had a primitive appearance. Just before leaving Boston I had read an article on Bingham in the American Mercury Magazine and the description has always been very vivid to me. It was described as a one-street town thirteen miles long and two saloons high. Little did I realize while reading, that within a few weeks I would set up my practice there.

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Immediately upon arrival, I went to the hospital, located my room, which was to be my home for over a year and placed my few belongings in order. Then I surveyed the building, which had a capacity of twelve or fourteen beds, and got my general bearings. There were five employees: an office girl, a janitor and cook combined, and three nurses. It was a very meagerly organized and poorly equipped institution. To me it seemed like a place for first-aid work only. On inspection, I found it very sub-standard in cleanliness. I spent the

first afternoon in the office and was impressed with the many nationalities that came in. Among them were Greeks, Austrians, Italians, Japanese, Finns and Mexicans. I had never seen such a variety even in the cosmopolitan center of Boston in the out-patient department. Many of the men were antagonistic and even challenged me. Before the day was over, I had had three free-for-all brawls' and had knocked three men down. By the time the third man came along, I was getting in pretty good form.

The thing that distressed me most was the lack of respect and regard the miners had for women and the very disrespectful way in which they addressed the girl attendant in the office.

298 That evening after I was through at the hospital, I strolled uptown with one of the men from the mine, Boyd Bernard, and went through the various joints, and I heard several men pass remarks. One said, "There goes the new doc. He's a pretty tough s.o.b. Better be careful what you say to him or he'll tie into you." That day was the only time I ever had a fight in Bingham. They considered me rather a tough hombre and a regular fellow from then on and I got along very well.

My first night in Bingham was a very restless one, as I heard the blasting in the mines, and especially in the Utah copper pit, going on all night long. It seemed to me that this must be characteristic of the battlefront where the shooting goes on in a periodic or rhythmic fashion.

On October 8 I arose at daybreak and continued my close inspection of the hospital. My attention became focused on a little room designated as the operating room[†]. It was dirty and a most unfit place for surgery; it had to be scrubbed. I had two dollars and fifty cents in my pocket, so I went down to J. C. Penney's and bought me a pair of coveralls for a dollar and seventy-five cents, and also a couple of bars of soap and a scrub brush. Returning to the hospital; I donned my working clothes, picked up a scrub bucket from somewhere and

[†] Very few operations had been performed in Bingham Hospital. The surgical cases had been sent to the County Hospital.

spent the entire morning scrubbing and cleaning the operating room. The walls had been well painted and when they were thoroughly cleaned, the room looked very respectable. How fortunate that the place was sanitary for in less than forty-eight hours a ruptured appendectomy-pregnancy case came in and an operation was necessary. I felt gratified that the room was thoroughly clean because that type of case could very easily become infected. Fortunately for me, the lady got along very well, with no signs of infection.

As I stated before, the hospital was poorly equipped and I was extremely handicapped in my work. There was no blood pressure machine in town, no microscope, no pressure sterilizer. There was only an old Arnold autoclave, which had been in use for many years. The process it was used for is called fractional sterilization. The materials to be made sterile were put in and steamed two or two and one-half hours, and then left several days for germination to take place from the bacteria not killed. Then the process was repeated and there was another delay of twenty-four hours and then the process of sterilization was repeated again and the goods were supposed to be sterile. I had never seen this process before and felt it was most unsatisfactory for the type of work with which I would be confronted. So I purchased a little pressure cooker for eighteen dollars which had been made for putting up fruit. This was the first means of pressure sterilization ever used in Bingham. It was most fortunate that I had the foresight to get this little sterilizer for soon we had many fracture cases where the closing of compound wounds was necessary. I used it for eight years and it served me well in performing many, many operations of the most technical type.

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The next morning I set out to acquaint myself with the various mine superintendents with whom Dr. Straup had medical contracts. There was the Utah Consolidated, commonly called The Highland Boy, the Utah Metals, farther up Car Fork in the Highland Boy District and the U. S. Mine up the main canyon.

I visited all three mines early in the morning of October 9. Then I went to Lark and visited the mine there, which was one of the properties it was my responsibility to cover.

That day I also laid out my plans for daily procedure. Surgery was to be at 6 a.m., following was the care of the hospital patients; then morning office hours for mine examinations; after that, calls on those being cared for in their homes. Directly after lunch I had afternoon office hours, then further care of hospital patients, and after-dinner office hours, followed by evening house calls which had accumulated during the day. Essentially this is the routine established and maintained throughout the twenty-six years I spent in Bingham. It was a very strenuous program but it was necessary as the ffiines were working twenty-four hours a day. They had three shifts, day shift, afternoon shift, and graveyard shift, and the men were coming from and going to work almost continuously.

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During these early days of routine, I became thoroughly acquainted with every department of the hospital from the heating units in the basement to the kitchen, store rooms, clinic-offices, staff, and the hospital itself. I knew every detail.

I was alone in Bingham, having left my family in Salt Lake, and the routine established required a great many hours of work. In fact, I soon had a curriculum of from sixteen to twenty hours a day and this extended over a period of seven days a week. There were only two holidays observed in the entire camp - Christmas and the Fourth of July.

After having thoroughly cleaned the operating room, I proceeded to scrub the dressing rooms and the two waiting rooms, one for men and one for women. These constituted the clinic. I did this work in my spare time and sometimes I scrubbed all night and didn't go to bed for periods of twenty-four to thirty-six hours. Soon we had the institution cleaned up, and we gained a reputation for cleanliness and for good

results in surgery. The scrubbing, in conjunction with the little pressure sterilizer, soon paid off in the end results which we obtained with our patients. Faith and confidence grew rapidly, so that the organization was soon working to over-capacity. We were required to get more beds and more help. Within six months, I had to have another physician come with me.

Hospital work grew rapidly and home visits grew to great proportions, creating a real problem in transportation. As soon as winter set in, we were unable to use our cars; and so we had to go on horseback, which had been the method of transportation before the automobile. Bobsleds were used to transport the ore down the canyon, but since they had a different track gauge from the cars, it was impossible for the autos to ride the ruts up and down the steep roads; so we had to go horseback. This was not a bad method of transportation, but it was slow. The old brown horse that I used for several years was a very reliable creature. He seemed to sense where I wanted to go and as he had only one rate of speed, I would put him in gear and away we would go. All I had to do was to hang on, and it's many a good nap I had as we traveled up and down the canyon road.

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The winters in Bingham were very severe, and it was quite an experience to face the blizzards on horseback. Night calls at the mine were very common, and often an injured man would have to be transported to the hospital by bobsled.

The home practice gradually became excessive. All obstetrical cases were delivered in the homes and many, many illnesses were cared for there. In fact the hospital had never won sufficient confidence in the minds of the people for them to send any patients there except terrifically sick ones who could not be cared for at home. They had to face the risk of hospital exposure. Certainly over a period of time, before I went to Bingham, it had been proved from the standpoint of infection, that hospital care was more dangerous than home care. Not only was this true of Bingham but practically all

hospital centers had been through this transitional stage. It was a great help to the community when this fear of infection at the hospital was dispelled.

As winter progressed, the snow became deeper and deeper so that penetration into outlying districts became impossible even on horseback. After riding as far as I could on my horse, I would put on skis or webs to finish my journey. At this time there were many outlying prospects in the canyon. Some were from three to six miles away from the central areas and this made work very tedious and laborious. At times I became terrifically fatigued and sometimes I would stay all night at these distant homes in order to get a little rest. It was quite a joy to be away from a telephone.

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Soon I found there was a very definite growth of confidence in the medical department of the mines. The people seemed satisfied with the efforts being made and they established a great warmth and thoughtfulness for me in order to make the work as light as possible. They exhibited faith in me, and their warmth and consideration were often quite touching. They developed such a degree of reliance on me that I began to have the feeling that I was becoming a necessary individual in the community where I had only promised to stay for six months.

This mutual reciprocity between my patients and me became an endearing feeling. It was maintained throughout all the years I spent in Bingham. I have been fortunate in developing an ever-deepening philosophy regarding my work, which inspires in me the belief that it can bring about the greatest human associations that a man can possibly possess (or enjoy). Practicing medicine creates a closeness with people that one can attain in no other way. My patients not only brought their physical problems to me but they brought all their problems. In fact, I soon became the father confessor to people of all faiths and all nationalities, and it was through this type of stimulus that the people gave me their complete confidence. I, in turn, felt duty bound to serve them in every way humanly possible.

A development growing out of this warm feeling began on my first Christmas in Bingham. I was stimulated to put up a nice Christmas tree on the front porch of Dr. Straup's home in front of the little clinic. There were many, many favorable comments, because it was the first sign of a public display for Christmas that had ever been seen in Bingham.

As a result, on January 7, that first year, I was invited to visit many Austrian homes where their orthodox Christmas was being celebrated. I think this was one of the most interesting things that ever came into my life. It was an entirely new and different concept of Christmas - something I had never known before. Here the spirit of Christmas was the emotional giving of one's self openly and wholeheartedly to any and all who would come to the door. The Austrian homes were open twenty-four hours a day for three consecutive days, and all who came were invited in and fed. The meal was a banquet such as I had never experienced in a home previously. Everyone was wined and dined most royally and the feeling of friendship and genial association was very impressive. I comprehended for the first time in my life that the giving of one's self to his friends and to all those who were attracted to his home is the true spirit of Christmas. There was nothing in the home that passed from one person to another that was not produced with their own hands. The people raised their own sheep and pigs and these were dressed and barbecued the day before the Christmas celebration. The entire banquet was prepared from things that the family had made in their own home. The custom of giving to others with no feeling of a purchase presence moved me deeply.

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The Austrian's gifts were all homemade. The planning and the work, the self-expression and real feeling that went into them were remarkable and unique.

Our daughter Ethel was born in Salt Lake September sixteenth, 1923. A few weeks later my wife and two daughters moved to Bingham. We had a one room apartment over Well's store. A year later we rented a seven room house across the street from the

hospital and that was our home until we left Bingham in the fall of 1948.

Our son Paul was born in Bingham May twenty-fourth, 1925.

As our children grew up, I took them with me to the Austrian homes and introduced them into what I felt is the true spirit of Christmas. Never a year has passed when I've been in the State of Utah that I have not gone to visit my Austrian friends in the Highland Boy District and celebrated Bohonk Christmas with them and each year has been a joyous occasion to me[†].

Schools

304 The schools soon became of some concern to me. I visited the Highland Boy School a month or two after my arrival in Bingham, and was taken from room to room by the principal. On entering one room, I asked, "How many different nationalities do you have in this room?" He answered, "I don't know how many we have in this room, but at the moment we have twenty-two different nations represented in the school of three hundred pupils." I remember that remark very vividly and it was a point that I noted throughout my association with school work from the primary grades into junior high and on into high school.

We had three main schools in Bingham, one in the Highland Boy District, one in Bingham proper, and one in Copperfield Lark, about nine miles away, had a separate school.

The students were transported in wagons and bobsleds until about 1926 or 1927 when trucks were used. This was after the roads had been cleared by way of scraping during the winter months. Up until this time all winter travel was by way of horse power or more specifically speaking, horse flesh.

[†] Extract from a note received from an Austrian girl after Dr. Paul's death: "I surely felt bad about Dr. Richards' death. He was always so close to our family. For the last thirty-two years he has always come to our house on the seventh day of January. He continued to come to my sister's home even after my father died. He was like a father to me."

My concern for the schools was caused by the frequency of epidemics. Smallpox, typhoid fever and diphtheria were practically endemic in Bingham District, and they would break out in epidemics of sufficient proportions to cause alarm. One of my first participations in community activity was to organize within the schools an immunization campaign against typhoid fever, smallpox and diphtheria.

The first massive immunization that was carried out on a generalized basis in the State of Utah was inaugurated in the Bingham School District. This procedure rapidly spread throughout the entire Jordan District. Within two or three years of this type of health education program, the Bingham District had a one hundred per cent immunization of the school population. On the last great drive against typhoid fever, I gave over eleven thousand injections. It is interesting to note that often the parents would contract typhoid, smallpox, or diphtheria and the children were kept home from school to care for them, but never came down themselves with the disease. I think this was the first thing I inaugurated in the mining camp that gave me a great deal of prestige.

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This school program was a general introduction into the problem of community health. School nurses were introduced into the educational system, pre-school examinations were given and periodic examinations were given to the entire primary, junior high and high school students every two or three years. During a child's stay in the public school system, he was examined at least four or five times. Accurate records were kept and maintained.

The need for dental care was impressed upon the community and an overall general preventive medical program was inaugurated. This grew so it finally became a feature of the entire Jordan School District. every doctor and dentist within the district was made a member of the Jordan School District Health Council, which was set up as a model for school health

programs. This system gained wide recognition and was broadcast throughout the entire United States.

The extreme advantage of this cooperative movement was seen most clearly during periods of depression. At that time we took care of the students who were unable to pay. We extracted their teeth which had gone beyond the point of repair and we removed badly infected tonsils and adenoids so as to attain as high a level of health as possible in school. Probably the highest per cent of this work was done in the Highland Boy District where the average income per family amounted to about fifty dollars a month.

306 In thinking of the health program of the schools, I realize what a wonderful part the Community House of Highland Boy played in the life of Bingham. Ada Duhigg was the supervisor and was the most community minded person I have ever contacted, and her heart and soul were dedicated to the interest of all people. Although the House was operated under the direction of the Methodist Church, it was always open to Mormon, Catholic, Jew, and all races, creeds and denominations. It was always open to community activities whatever they might be. My relationship with it, however, was in connection with health programs. We held many pre-school clinics there, also general health clinics for the whole community and dental clinics. We spent many mornings taking out tonsils† and adenoids.

Miss Louise Van Nay, after her marriage Mrs. Louise Yager, was the school nurse and her services were invaluable. She prepared the children and had all in readiness when I arrived prepared to operate. She was cheerful, understanding and very efficient. Much credit is due her in carrying out this health program in the schools. The health program that we established in Bingham soon spread throughout the whole Jordan District. Often in this work I contacted Parent Teachers Associations. In fact, the Parent Teacher Association became the medium

† Dr . Paul often removed twenty-five to thirty pair of tonsils in one morning.

through which the general health education of the district was promoted. We instructed the children and parents on the general principles of health, and especially on the communicable diseases. We taught them the proper attitudes to have toward these illnesses, and how they could be avoided. They got a fairly well rounded education on the subject.

I do not recall the year but it was while I was President of the Jordan School District that polio became so prevalent that all the schools in the State closed. On the basis of the educational program we had carried out, which had included many lectures by Dr. Samuel Paul and other outstanding doctors, the school board issued a statement that the Jordan Schools would remain in session. The school buses would continue to operate and things would go on as usual. The parents were given the privilege of keeping their children home if they so desired. When the epidemic subsided, after about two and one-half months, a general survey of the State showed that the Jordan District whose schools were the only ones to remain open, had a lower frequency of polio than any other school district in the State of Utah.

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General physiology, anatomy and sex education soon became a very prominent part in the educational system of the school in Bingham. I think it is worth knowing how sex education began.

Chapter 10: Sex Education and School Board Activities

308 It was about 1924 when the principal of Bingham High came to me and asked if I would talk to the junior and senior boys. I was glad for the opportunity and a two-hour session was arranged. When we were assembled in the auditorium I asked them what they would like me to discuss. There was such a shyness present that it was impossible to glean from them what they had in mind, so we passed pencil and paper and asked them to write in their own language the questions they wanted answered. We received about three-hundred queries. I took these home and looked them over and reported to the principal that I would like to have three teachers of my own choosing go over them, compile them in general groups and select twenty or twenty-five typical questions for discussion.

These questions were taken home and studied carefully. Then I asked the principal to call all the parents of the students together because there was a problem which I wished to discuss with them. The time was set for this meeting and there was such a large attendance that the auditorium, which held over eight-hundred persons, could not contain them all. We had overflow meetings in the class rooms and I stood at the back of the hall

and talked so loud that they could all hear me. I presented the questions that the boys wanted discussed and got the united consent of all the parents to present them to the boys.

After this program was given to the boys, the parents requested that it be presented to the girls. We had the girls submit questions and followed the same procedure as with the boys. This was done in the presence of nurses and it extended over four two-hour lectures. After the program had been presented to all the high school students, a request came from the parents that they be brought together in a general assembly and be given the same lectures. I considered this very appropriate on their part, because they found themselves unable to discuss these problems with their children, and so the same instruction was given the parents.

This program brought about a very wholesome feeling in the community and created between me and the school executives a close unity. The people soon insisted that I become a representative on the Jordan School Board.

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I served for sixteen years on the Jordan School Board, 6 years as a member, and 10 years as President. It was a wonderful experience for it gave me the opportunity of helping to form policies in the educational field that would influence the lives of many people for years to come. One of my great desires was to see Bingham High School moved out of crowded Bingham Canyon. This desire was fulfilled when the new high school was built in Copperton five miles away, several miles beyond the mouth of the canyon. This move proved to be very farsighted because Bingham at the present time has very few residents. Many of the buildings have been torn down or vacated.

While I was on the Board, I felt very strongly that we should develop two systems of education in our high schools. One system to prepare the students to make a living and the other system to prepare them for college. (Only about fifteen percent of these boys and girls ever got to college.) I felt each should decide for himself.

Not long ago I met a man who was on the Board with me and he said, "Doctor, I often think how you talked to us and wanted us to spend more and more money on shops, on homemaking and domestic equipment, on the business department and on all kinds of things for occupational and vocational pursuits, and how well it paid off."

We developed our shops and purchased the very best equipment and when the war broke out, the shops in Jordan District were taken over by the government for training centers. They held early morning classes and night classes there. The school had its regular hours but those shops were used almost around the clock.

Chapter 11: Industrial Diseases

I have spoken of the Community health program. Now I would like to confine myself specifically to the problems that arose among the workers. I soon developed a rather large surgical practice. In fact, I had been in Bingham only a few months when surgical cases came to me in no small proportions. A large percentage of these cases did not get along well, due to post-operative chest complications. Upon investigation, I found many of the men were suffering from silicosis, a disease brought about by inhalation of fine particles of silica dust during the mining processes. Local inquiries were made concerning this disease and its relationship to tuberculosis, a condition called silicos tuberculosis. I found that in Bingham no medical investigation had been made. The doctors knew that the condition existed but had done nothing relative to an understanding of the disease, and especially nothing by way of prevention. This was my first industrial medical problem and I grasped it with great concern. Chest infections were very numerous, especially pneumonia cases.

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The miners ran three shifts around the clock and men came out of the mines at all hours. They were soaking wet and had to walk a distance of several miles in wet clothes. In the

winter time when the weather was cold, they frequently arrived home with their clothes completely frozen. Their wives had to get up and help them undress as they were unable to remove the frozen garments by themselves. This made the incidents of pneumonia very high and I was much concerned over the death rate of pneumonia cases among the workers. One of my very first health programs for the employees was to obtain change-rooms at the mines so that the men could go to work in civilian clothes, change into work clothes, and then go underground. As they returned to the surface, they went to the change-room, removed their wet clothes, had a shower, put on their civilian clothes, and returned home in perfect comfort. It was surprising what the installation of those change-rooms in all the mines did to reduce the death rate of pneumonia among the workers. It was soon no higher than the death rate among the people of the Community as a whole.

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However, silicosis and its various ramifications were very prevalent and became a great challenge to me. I made an extensive study of this condition and traveled from Mexico on the south, all through the United States, and into Canada, wherever anything was known about this disease, and visited all the centers interested in the research of silica exposure. I went to Canada on numerous occasions and became well acquainted with Sir Frederic Banting, the man who discovered insulin for the treatment of diabetes. At that time he was greatly interested in silicosis and was working on it as a research project. Sir Frederic Bantins was not a clinical doctor. He was a research man and his fields of investigation were varied and numerous. I went into the two largest mining areas of Canada and spent weeks investigating diseases of the chest. The Canadians carried out the earliest program in this field. The laws they made became effective in 1928, and it was in 1929 that I went there to see what kind of program they had inaugurated.

I was a frequent visitor at the Saranac Lake Laboratories where Doctor Roy Gardner was spending the greater part of

his time in the investigation of silicosis. I became well acquainted with Roy personally as well as professionally. His was one of the dearest friendships that I ever established and when he died, I was the only man asked to give a memorial address for him. The first Symposium ever held on silicosis was held at Saranac Lake in about 1931. Numerous meetings have been held there on industrial chest disease since, and I have attended them all. This has been a most liberal source of education as Saranac has been the mecca, so to speak, of industrial chest disease investigation throughout the world. At every meeting held we have had representatives from all over the globe.

At this point it may be interesting to say a few words relative to Doctor Edward Livingston Trudeau who was the originator and founder of the Trudeau Sanitarium and Saranac Laboratories. Originally he was a practitioner in New York City. As I recall, it was in the early 1880's that he had a hemorrhage from the lungs. He was told he had tuberculosis so he left his practice and went into the Adirondacks and stayed for some time. Thinking he was cured, he returned to his practice in the city only to have another hemorrhage. So he decided to go back to the mountains and never leave that area. During this rest period his doctor friends from the city and other parts of the country sent their tubercular patients to him, and this was the beginning of the Trudeau Sanitarium and Saranac Laboratories. It was here that my friend, Doctor Roy Gardner, came in 1920 or 1921 when he had his breakdown. During the period of his recovery, he became interested in research of chest diseases and later became research director for industrial chest diseases at Saranac.

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The little two-room red cottage built in the woods at a considerable distance from Saranac Lake town still stands as the original and monumental structure for the sole purpose of investigation and treatment of tuberculosis. The picture of this little cottage is on the T.B. stamp. Doctor Trudeau established the modern concept for the treatment of

tuberculosis, and he was one of the earliest to discover the tuberculous bacillis.

The rest treatment came about accidentally. One of the doctor's patients, who was a good horseman, fell from his horse and broke his leg so badly that he was confined to his bed for many months. During this rest period, his condition had improved so remarkably that Doctor Traudeau made the rest cure the background for the treatment of tuberculosis.

314 Having acquired quite a thorough understanding of the background of our industrial problems, I insisted that the mines in Bingham hire a man who was expertly trained in safety first methods and who also had the ability to make accurate analysis of the principles of ventilation. The educational problem had gone on with the management to the degree that they had confidence in my medical judgment and so they brought in an expert in the field of industrial hygiene. His name was Oscar A. Glaser and he came from California, where he had been employed by the State Industrial Commission as a mine inspector.

Mr. Glaser and I spent many hours together going over safety hazards as well as health hazards in underground mining. It rested upon his shoulders to ferret out and gather data upon which a logical program could be formed.

The first industrial disease which was thoroughly investigated for its environmental hazard was silicosis. Our great concern was air contamination. It was a real problem when they ran three shifts a day, for one group to blast, then walk out, with another shift coming right in and starting work, under conditions of poor ventilation. We encountered very marked health hazards because of fumes in the air due to blasting and because of the contamination of silica.

It was at this time that wet drilling was inaugurated. The wetting down procedures of mining were carried out thoroughly

and accurately. He saw that good water supplies were provided throughout the mines, that sanitary toilets were installed, and the places were furnished where the men could eat their lunches and conduct their usual procedures in an environment that was pleasant and good from the health standpoint. All of these changes were great challenges and took much study on my part as well as education on the part of those who had to undertake these corrective procedures. Mr. Glaser made long , regular and continued studies of air-borne dusts from drilling and blasting. These records he established from nearly every area of the mine, and it was very interesting to correlate the environmental conditions of his research with the clinical records of various developments which I gathered from chest X-rays and other examinations of all the employees. This formulated the background of our thinking in later years when we suggested the industrial health research project which was carried out by the U. S. Public Health Service. It was this investigation which helped to lay the foundation upon which our State Industrial Disease Act was formulated and made into statutory law.

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Mr. Glaser has been a constant friend and most cooperative worker in all of my problems on safety and industrial hygiene. He has helped me materially in any type of investigation in which I have become interested such as the safety goggles, mine research work, and the study of exposures which arose as a potential hazard in various parts of the mines. He has been very loyal and we have established a firm friendship which has lasted through the years.

Chapter 12: Safety First and Rehabilitation

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At first the accident cases were all very shocking to me, but one soon develops a type of thinking which is beyond his own emotions, and he wishes only to be endowed with efficiency and skill for the good and restoration of his patients. Such experiences help a man to develop the qualities of stamina, self-control, endurance, and determination to carry on to the best of his ability. This kind of thinking, when passed on to the patient, becomes a great factor in the recovery and rehabilitation of the injured man in bringing him back to health and normal living. I knew that the families, too, must be impressed with such psychology when around the sick bed; nurses must be educated; all attendants must be properly put in line so as to give the patient every mental, physical, and environmental support that could possibly be afforded him. This was all a great educational program for me, and one that I had to develop as time went on.

The causes for all these accidents needed attention and I was one of the first men in Utah to take up safety-first measures. No one can appreciate the necessity of prevention more than the doctor who sees these terrible accidents and has the responsibility of taking care of them.

The Safety First program, and rehabilitation along with it, were the first two great undertakings that I engaged in which were not technically in the surgical field. I was very prominent in these programs and spent many hours both locally, in the State, and nationally getting them started. My work brought me Presidential awards in each of these fields. I was very honored to receive one of the first two awards given in the State of Utah. I became so interested in training the miners in the safety program and rescue work that at one time the entire group of men underground held rescue certificates from the State Bureau of Mines.

The safety movement required a great deal of education of the management of the mines also when we got started, we had men organized in safety first work in all types of accidents, prevention, and follow-up on accident cases. This program was pursued vigorously and necessitated the cooperation of doctors, shift bosses, safety first men and the general administrative personnel of the mines. Again this brings us back into the general field of the application of good principles of medicine and of what is best for the men whom it is the doctor's responsibility to keep well and to protect.

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The concept of industrial medicine soon became paramount in my mind. I felt it was not a case of taking care of disease or accident after exposing the men to bad environmental conditions, but of preventing such conditions from existing. It was this concept of prevention that stimulated me very early in my activities to get improved working conditions for the men under my care. This program involved a great many engineering principles whereby safety devices were built and many safeguards were established. It was a demanding necessity that all precautions be taken that were humanly possible. The difficulties connected with workmen's compensation and cost of human repair were mounting steadily. This made the safety first program and preventive medicine bargain counters for management to consider and eventually learn how much money could be saved by increased production, and how much human suffering could be avoided.

In going ahead with our program, we soon found that poor lighting under the old use of candles was causing bad eye conditions; so the carbide light came into use. But we found that that, too, was insufficient and so electric lights were installed. The men could then see to do their work as accurately, efficiently, and safely as possible. We were, however, still confronted with eye injury from blasting. Many men lost their vision from this source, and we were determined to correct this with the safety goggle. I think this was one of the most interesting projects that we undertook, and it was a problem that occupied a great deal of time.

I made plaster faces and mounted them on a board structure. The faces were covered with three-sixteenths inch of paraffin so he could determine the amount of foreign material that would be thrown at it and imbedded when subjected to the blast of several sticks of powder. These experiments were carried out under the close supervision of the Safety Department and the Department of Hygiene and Engineering, besides representatives of various optical firms that furnished the goggles with which I've experimented.

These various agents went underground at ten or eleven o'clock at night and did not emerge until early the next morning. The faces with goggles on were placed in spring frames so as to have as much as possible a life-like resiliency, and the manikins were taken to various positions in the mine and exposed to the blasts. The faces were removed with the goggles on and studied. It took months and months before goggles that could withstand the blasts were perfected. After that was accomplished, goggles became a compulsory safety measure for all underground workers, and it is surprising to read statistics and discover how eye injuries decreased.

Brain and skull injuries also showed a marked decrease when the safety helmet became a compulsory factor in mine work. But I was never quite converted to the safety shoe, because I found in many instances that it contributed to the injury.

This was due to the fact that the metal which was used for protection became a guillotine sort of instrument causing amputations where heretofore nothing but a crushing injury had resulted.

I appreciate the fact that the safety program with almost complete mine bolting and timbering, and with better ventilation, sanitation, and lighting, and all the safeguarding to minimize accident hazards, has cost the mining companies millions of dollars. However, I am sure the saving in life, injuries, and human suffering, along with the increased production at the mines, and the happiness among the workers, and the good will that has been created, has amply repaid the companies for this great expenditure of time, effort and money.

Chapter 13: Operations

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In my preparation for medical practice the reader will recall that I had fair training in the overall aspects of general surgery, and I had general practice education for one year, and then I specialized in gynecology and obstetrics. In Bingham my immediate medical problems were those of surgery. There were many cases of broken legs, arms, backs, skulls, and both-simple and compound fractures in every part of the body. This was in the days before our safety campaign had been inaugurated. The greatest part of the medical aspects of industrial relationships was that of traumatic surgery.

Many of these fractures were of a severe compound type and needed extensive clean up jobs and technical restoration of the tissue and bony structures. In my first few years of practice, I operated on a great number of skull fractures. By the time I had been practice ten or twelve years, I had removed enough bony structure from skull fractures to fill a half-peck measure. This gave me a great liberal experience in the traumatic field. One of the theories where I varied from the popular concepts of the day was in the treatment of fractures of the spinal column. The prevalent concept was that such a fracture would result in a man's complete and permanent

disability. I soon learned that a fracture of the spine, with no serious nerve damage, need be considered only as other fractures and should be treated as such. As soon as a patient came in with a back injury, he was encouraged to believe that he would eventually return to his regular type of employment. This began in 1923 and was my first big campaign in the field of rehabilitation. I have always held that you cannot cripple a man mentally by impressing him with the severity of his injury, and then cure him physically. This philosophy has dominated my medical practice since my earliest days in Bingham. This was before the beginnings of any campaigns of rehabilitation.

The fractured spine patients gradually began to go back to work. I had a great deal of opposition in having these men rated before the Industrial Commission, since many of our local doctors held to the theory that these men should never again do hard, strenuous labor. I believe this was the beginning of my establishing the firm position before the State Industrial Commission, which I have enjoyed for many years. In over two hundred spine injuries which have involved the weight bearing structure, besides many other spine fractures which have not involved the weight bearing structure, I have found that eighty per cent of the men have gone back to their regular employment. These are cases which have been treated simply by postural correction of the back deformities, those which have had surgical interference for the release of nerve pressure, and those where the back has been stabilized with bone graft.

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By the early 1930's I had operated on a great many back cases, both for disease and back injury. Because of my familiarity with the bony structure of the back, and also with the spinal cord and its nerve distribution and mechanism, I was one of the first individual doctors to study and do disc operations.

On several trips to Boston I had discussed the possibilities of the intervertebral disc operations with Doctors Barr and Mixter. After their first such operation in the fall of 1932, I came home and did several intervertebral disc operations with good results. My reputation spread rapidly, and during the 1930's and 1940's,

up until the time I left Bingham in 1948, I did hundreds of operations for either the simple removal of a disc or a secondary operation for stabilization of the back after a disc had been removed. These cases came to me from far and wide. In one year I had cases from twenty-two states throughout the country.

I recall there was another operation which came out of Boston, and I feel deeply indebted to all these great medical centers that have made a contribution to me in my work. On one visit to Boston I met Doctor Codman who was doing a great deal of research work on injuries of the shoulders. He, with Doctor William Stevenson[†], who did his dissection work, had found that rupture of the supraspinatus tendon in a dislocated shoulder was the great residual factor of persistent disability. After my investigation of shoulder problems with Doctor Codman, I came home and operated on three ruptured supraspinatus tendons in one month. The results were good and this brought to me a great influx of men and women with shoulder disabilities, and I operated on a large number of such cases within the next few years.

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I made from two to four trips a year. I spent from two to six weeks on each visit studying and investigating the methods being used in the large medical centers throughout the United States and Canada. This, with my liberal experience in surgery, afforded me the opportunity of participating on many medical panels and discussions wherever I traveled. After a few years of this experience I was invited to make my presentation to the American College of Surgeons for admission in that organization[‡]. The required work was submitted and an immediate acceptance was sent me. I was initiated into the American College of Surgeons in Boston and found that I was the first in my graduating class from Harvard to be recognized by this organization.

In conjunction with the mentioned fields of traumatic and general surgery, I have only briefly outlined a few

[†] This was the Dr. William Stevenson in his student years at Harvard who later operated on Dr. Paul's hands in New York City.

[‡] Admission into this organization consisted of reporting on one-hundred unusual cases which had come under Dr. Paul's care. Charts and the case history of each patient had to be submitted in detail.

outstanding points. Chest surgery in my early days in Bingham was almost unknown. Many of my cases were blast injuries where men had picked into missed holes, and one, two, or three sticks of dynamite had gone off in their immediate presence.

Many times I have removed rocks from the size of a marble to the size of a baseball which had penetrated into the lung cavity or the abdomen. By good principles of surgical cleanliness (and this was before the advent of sulfa drug or antibiotics), we had amazing results. The first case of a radical opening of the chest that I ever say was one of extreme emergency on which I operated under my own guidance.

A car had run over one side of the man's chest. All the ribs on that side were fractured and the chest cavity was laid open so that by the time he got to the hospital he was in extreme distress, with one lung completely collapsed. You could look into his chest cavity as easily as you could stand by an open door and look into another room. This case was a terrific challenge, and I soon had the man on the operating table. I cleaned the wounds thoroughly, approximated the structure as much as possible, removed what bone was necessary, closed up the soft tissue, and aspirated the air from the thoracic cavity. By the next day the man was practically out of shock. Good results with this type of injury gave me great boldness, so I had no timidity or fear of tackling any job which confronted me.

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I have had fractured pelvic cases where men have fallen and have lit straddle of a solid object and been split practically through the middle. You could look into the abdomen, up through the rectum and bladder and, in some cases, the viscera were hanging out. I have had many cases of this type and have found that bold immediate procedures have brought about good results. I have seen men completely eviscerated without the fracture of a bone. Many a case has come to me where the abdominal cavity has been opened and the entire contents wrapped in a towel to hold them in position. A high percentage of these men have completely recovered and gone back to work.

Chapter 14: Disasters and Accidents

Fire

324 In my early days in Bingham, I recall types of disaster that were not common in every doctor's life. A number of times Bingham was threatened with destruction by fire. These conflagrations would wipe out great sections of the town on both sides of the one-and-only road. We had only a volunteer fire department, with little or no fire protection, and it was a miracle that the flames were ever stopped.

From the medical viewpoint, these fires had a great significance. The calmness with which the people maintained themselves through stress and strain and the venturesomeness with which they faced death were amazing.

We always lost one or two people by falling walls or the collapse of buildings, and a great many cases of burns resulted. Some of my earliest cases of extensive hand repairs, amputations, skin grafting, and treatment of shock were experienced on these occasions.

I recall one fire where our own home was involved, the house next to us having been partly destroyed. People from all over town came to the rescue and by the time I arrived home, many of our belongings had been removed from the house. Fortunately, I arrived in time to bring a halt to this because our house was not burned or touched in any way by the fire. In fact, people, trying to rush things out of the house and tracking our rugs with dirt and filth, brought about our greatest damage. Days later I found and recovered our books and bookcases which had been hauled about one-half mile from the house and set down in a vacant lot. No one seemed to know where they had been taken. It was a touching thing to me to see how people were so anxious to preserve everything.

One of our largest fires was in the Highland Boy District. The fire was of great proportions. The school building burned down and great sections of the district were burned out. Hundreds were left homeless. This and many other occasions gave the Community House an opportunity to show the great help it afforded the community in being the center for the injured, as well as the homeless. Many people were provided for under that roof until more permanent arrangements could be made. We have already made mention of the Highland Boy Community House in connection with the Health Program. We have also made mention of Ada Duhigg. She was a great benefactor and humanitarian, one of the greatest I have ever known.

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Flood

Another type of disaster in Bingham was the extreme floods. These involved every part of the canyon at various times. We have had floods rush down and go right through our house, leaving mud and silt several inches deep on the lower floor. We were very fortunate for in some sections of the town, entire houses were filled with debris, rocks and mud to within a foot of the ceiling. These floods occurred not only once but numerous times. They seemed to fall in characteristic areas.

One of our worst floods was in Copperton—shortly after the construction of our beautiful new Bingham High School. The buildings were flooded; however, this misfortune resulted in flood control construction during the depression, which gave employment to many men. Large canals, diversion channels, and concrete retaining walls were built, which proved very successful. In floods that occurred later, our school was never jeopardized.

I have seen eighteen inches of water come down that narrow, steep, twisting canyon road, which is the only road in or out of Bingham, and I realized that the parked cars were a hazard. We feared the flood would pile them up and create a dam across the street of such proportions that the water would be forced around and into the buildings, thus undermining their foundations and causing them to collapse.

326 To prevent this disaster, a man was supported by two ropes, and sent out into the stream. He would pick up the front end of the auto and be able to throw it around into the current with comparative ease because of the great velocity of the water. The driver in the car would then drive it down stream and out of the canyon.

Blasting

Another type of disaster resulted from blasting. I have seen men who were blown to small fragments or who have had all their extremities blown off. The worst cases were the ones where the faces were severely involved. Before the safety goggles were used, many cases of permanent blindness occurred. These tragic occurrences brought me many interesting cases.

Cave In

Of all the types of mine disasters, I think the cave-in has offered me more experience than any other one. I always made

it a practice to go into the mine and help recover the men at the place of injury. We had many men pinned under rocks and it took hours to remove them. On several occasions, in order to save the man's life, I have had to amputate an arm, hand, foot or leg which we were unable to extricate. These have been difficult problems because I could use no antiseptics and the only type of anesthetic which could be used was a local with morphine. It is an interesting thing that none of these cases ever resulted in a serious type of infection.

I have done these amputations from the most awkward positions, having no room in which to work. I might be stretched out on the man, or lying parallel to him, while performing the operation.

These mine disasters have afforded me great experience in endurance. I have gone into the mine and stayed three or four days without leaving. You can appreciate what tension I was under while making such a supreme effort to save a life. These were situations which I am sure few doctors have faced.

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I want to express appreciation here to the Catholic fathers who were of great aid to me in these tragic situations. I have made practically no mention of religion, but the Catholic faith was quite prevalent in Bingham. The fathers were very willing to give me help at all times. I found them most beneficial in maintaining courage, faith and confidence among the patients. These are the situations in a community which a doctor goes through that help him to gain the confidence of the people as he can gain in no other way. I think it was this diligence with which I pursued my course of responsibility that built for me a good feeling among the people of Bingham.

Snow Slides

Another type of disaster which I have seen on several different occasions is the snowslide. The greatest slide we had happened in February 1926 when the entire Sap Gulch

in the Highland Boy District was covered with many feet of snow. Every house in the Gulch collapsed, burying one hundred and fifty persons. Out of this group we removed thirty-five dead and fifty badly injured; the remainder came out without serious difficulty except for shock.

The most striking feature in these snowslide cases was the frozen victims. Many of these people, as the houses burst open, flew out into space with snow completely enveloping them as they fell. Some were thrown a considerable distance, as much as two city blocks. Those who were fortunate enough to be entirely enveloped in snow, without coming in contact with rock or timber or other agents which could injure them, were caught in a bed of loose snow and stayed there for hours until recovered by a rescue crew.

328 These bodies were a puzzle to me at first. I'll never forget the first frozen victim I encountered. I was with the crew telling them to be careful as they shoveled through the snow so as not to thrust their tools into a body. Just as I got through giving instructions to one of the men, I glanced down and saw a tinge of blood in the snow. We proceeded with care and removed the body and took it into the office of the Highland Boy mine, which we had turned into a temporary hospital containing about thirty-five emergency beds. The body was so frozen we could have placed the head on one chair and the feet on another chair and allowed two or three people to sit on the body without causing it to bend or break. I found a beating heart! This presented a new problem as to how to thaw out someone thus frozen. We moved the body to a cool room, forty-five to fifty degrees, and cut away all the clothing. Then we organized three teams of our persons each and rotated these teams every five to six minutes. They were sent in with soft dry towels to remove all snow and superficial frost from the body and wipe the skin entirely dry. Then they gently massaged the entire surface of the victim, and the warmth from their hands gradually removed the frost. Sometimes it took hours to revive one person. At times we had sixty to eighty people busy with the frozen bodies

that had been recovered. It is my recollection that no one died where there was a discernable heart beat, even though it was as slow as eight beats per minute. These patients all recovered without colds and with no bodily complications.

In examining them after they had recovered, I found that they had experienced no great discomfort of any kind unless they had met with an injury from a log, a piece of timber, or from rocks which had hit them. They had no bad recollections. If they had been thrown into space and had encountered no solid object, there was absolutely no distress. As the snow settled down, there was no hysteria. Knowing they were helpless and could not move, the victims had consoled themselves in feeling that it was just a matter of being trapped and all they could do was to be patient. The frost had brought them into an early state of anesthesia and they had dropped off to sleep. They said that the awakening had been no more mysterious than the desire for slumber after they knew they were enveloped in a vault of snow.

That was always an extremely interesting thing to me. None of these numerous patients who has recovered from snowslides had a particle of fear. It seems scarcely possible that people could go through this kind of experience and have no residual shock or apprehensiveness.

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The first thing I did when I arrived at the scene of disaster was to sit down and figure out what things were needed to set up hospital facilities. As already stated, it was just a matter of a few hours before we had a fairly good emergency hospital established so that we could take care of thirty or thirty-five patients at a time. This great emergency in Sap Gulch lasted over a period of days.

There are aspects to disaster other than the mere medical ones and for these the community became responsible. I can readily understand my own sense of obligation as the physician to these people who were injured, but to see the entire community come to their assistance was a wonderful and touching experience. Within a very short time we had amassed

a great amount of material. The food that was brought in was amazing. One can hardly conceive of the things that arrived. The bakeries worked day and night.

The mine superintendents took all of the thousands of men and organized them into shifts working one to two hours at a time, around the clock. These relay shifts dug and searched in the snow over a period of days until the entire area had been turned over. Then they went allover the place the second time, and it is a significant thing that when spring arrived and the ground was clear, there was nothing of any great importance that had been missed.

330 One of the outstanding features of this disaster to me was the miraculous way in which some people were saved. I shall never forget one family where three young children were in the bathroom. One child was severely injured by being caught between the toilet and the bathtub. The circulation of one leg was impaired for about ten to twelve hours. The other two children were thrown into the bathtub, and as the house collapsed the tub was sufficiently strong to protect them and they came out with no injuries whatsoever.

It was a strange thing how many people were thrown into various positions, in which they were trapped, yet suffered no physical damage. These people went through much greater mental shock than the ones who were buried in the snow. I have already made mention of the fact that the Bingham miners worked three shifts around the clock. When the slide occurred many of the people were in bed as the graveyard shift had just come off and the day shift had just gone on. It happened at a most fortunate hour—a little after nine o'clock in the morning, and all the children had gone to school. Otherwise, at least seventy-five to one hundred more would have been caught in the slide.

One of the most terrible things that remain in my memory was the screaming of people who were caught and burned to death. You will appreciate that all the houses collapsed, and those having sufficient embers in the stoves caught fire. The occupants of

those houses practically steamed to death, rather than burned, because the fire smoldered in the snow and produced steam, and these people came out more scalded than burned. These cases were very challenging because they presented problems with which I had never before been confronted.

Our burned and scalded cases, shock cases, and fracture cases were numerous, but most unusual of all were the frozen bodies.

Out of these experiences of snowslides came our study of how to prevent such disasters. It is interesting to know what caused these slides. As the wind blew up one slope of the mountain, it blew the snow over the crest creating great cones of overhanging snow on the opposite side. Sometimes these cones would extend out over a distance of many feet. It was when they broke off in great massive proportions and slid down the mountain that they gathered the snow in these areas and created a large moving mass which took everything with it—trees, rocks, houses, and every other object, large or small.

Again, I must express my compliments to the people of Bingham for the great way in which they rallied around and gave of their services and of everything they possessed in bringing about the possible rescue and preservation of life. At no other time in my experience have people so diligently stood by, waiting for an opportunity to serve. Many of them did not go to bed for days and days. While they were not on so great a tension nor so actively engaged as I, their vigilance was just as great.

We learned that a good way to prevent snow slides was to forestall the formation of large overhanging cones. We had a close inspection of the mountain tops in the winter time. When these cones reached small proportions they were broken off and allowed to slip down before they reached the size where they could create the moving of a terrific volume of snow down the side of the mountain.

My experience with frozen bodies soon became known throughout the country and I was asked to present the story before

various groups of doctors. They always asked me, "What is the difference between being frozen above the snow and being frozen under the snow?" My whole explanation is that when frozen above the snow, the body is frozen at such a rapid rate that the living cell always ruptures. I came to this conclusion because in cases where a person was frozen under the snow with an arm or leg exposed, the exposed part had to be amputated because of gangrene, while the part buried under the snow came out without any injury to the cell.

I have always felt disappointed that I did not have an opportunity to move in laboratory equipment in these cases. How wonderful it would have been if we could have moved into one of these situations with X-ray, fluoroscope, basalmetabolism and electro cardiograph machines, and various types of bio-chemical analysis equipment so that we could have followed the alterations of blood flow, the restoration of heart to normal, and the circulation in general, and thus have ascertained all of these things on a purely scientific basis!

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I have always said that something good would come out of these studies. I remember that a few years later Doctor Temple Fay and Doctor Bunter at Temple University in Philadelphia attempted to use freezing as a means of combating cancer. On one of my trips East I spent some time with them and showed them how to freeze a body. It was out of this freezing experience that we learned how to do amputation by freezing the limb and letting that act as the anesthetic. Many a limb has been amputated under the anesthesia of freezing. I am very happy to know that in recent years the process called hypo-thermis has been used as the anesthetic in surgery on the heart. I had always had the conviction that someday this would have a practical use, and I have lived to see some of its applications.

One little point of interest is the fact that the last few years I have been on the Council of Industrial Health of the American Medical Association. The chairman of the council, Dr. William E. Shepherd, who is vice-president of Metropolitan Life Insurance Company and also medical vice president, has

told me on several occasions that the first time he ever saw me was at an American Medical Convention in Chicago when I presented the problem of the frozen body[†]. That happened about twenty-five years previous to our meeting on the council.

Bag of Bones

I certainly think I should mention the case which in Bingham we have always termed the Bag of Bones. One of our miners fell the entire distance of the Yampa Shaft, which was something over twenty-five hundred feet. He lost all his clothing and his shoes fell off.

Against all orders and all state laws and regulations, I rode the top of the cage up and down several times, marking the places his body had hit. We found he had struck one wall of the shaft and then had been deflected to the opposite wall. As I recall, the body, in the fall, had bounced from one side of the shaft to the other, striking as many as forty-five or fifty times.

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We could not find the body and were at a loss to know what could have happened. I suggested that we pump out the sump below the shaft, and the mine management thought my thinking was ridiculous, but we had searched everywhere else, and I felt we were compelled to see if by some peculiar method he could have dropped into the sump. When the sump was finally emptied by use of extra pumps, we found the body lying at the bottom. He was brought to the surface of the station, and on examination it was very evident what had happened. The skin was all in tact but his bones were pulverized and his tissues stretched and badly mutilated. When we picked him up by the head and shoulders, everything ran toward his legs and they expanded to at least twice the normal size. Then we took hold of his feet, and everything ran toward his head. His head, shoulders and thorax expanded to fifty or sixty per cent over

[†] Doctor Paul said that a doctor who was to give a paper at the convention failed to appear, and there was fifteen or twenty minutes of unoccupied time. Someone called out from the audience, "Have Dr. Paul Richards present the problem of the frozen body." Years later Doctor Shepherd told my brother Dr. Paul that many of the doctors in that audience thought he was a big liar; they couldn't believe that story.

normal. This was really a very peculiar case. I have never seen anything like it before or since.

Now, the explanation as to how he got into the sump is of interest. On one part of the floor of the station there was an opening between the planks about four and one-half inches by six or eight feet. I recall I could barely push my foot down through it. His body apparently fell directly over this hole and he had hour-glassed through. This must have taken some time, but this is the explanation that we finally arrived at as to how the body got into the sump. There was no other opening.

Fire

334 Whenever a fire of any proportion occurred near the hospital, we organized rescue crews. Four people were placed at the door or in the room or around the bed of each patient. Usually there were thirty-five to fifty patients in the hospital, so you can appreciate that this involved the organizing of quite a large group. These people were told never to move a person until I gave the command. I shall never forget one fire when I found my most seriously injured patient gone. When I went to view this patient, his room was empty. He was a man whose legs were both badly comminuted. As I recall, one thigh was fragmented in eight or ten different places. Several hours later, when I had located the men who had been placed at his bed, I found that the patient had pleaded with them to such an extent that they had cut off all the apparatus I had him in, picked him up in their arms and carried him out of the hospital and up the street a city block, where they placed him in the theatre. I found him on the floor just below the stage, six or seven hours after the fire had been extinguished.

Bus Accident

While I was President of Jordan School District, it became my duty to take charge of a bus accident. A telephone call

came in one morning saying that a school bus had been struck by a north bound Denver and Rio Grande train, due west and south of Jordan High School. A few minutes later I was at the scene of action and it was a terrible sight. A freight train of fifty or sixty cars had struck a bus carrying over thirty students. The bus must have been directly on the track at the time of the collision for the force was so great that it threw the whole bus, body and all, a distance of forty or fifty feet. This impact must have been something like the snowslide striking a house, for the students in the bus flew out into space. Some were thrown on the tracks in the course of the train while others were thrown entirely free receiving no injuries of any type. As I recall, about fifteen children lost their lives. A large percentage of the others were badly injured, but a few got off with no injury at all.

One of the important things concerning this accident was the way things were handled. I stayed on the scene until all the bodies had been cleaned up. Many of them were mangled and torn into shreds and small fragments we got underneath the train with whisk-brooms and dust-pans and gathered pieces of flesh, bowel, clothing, hair, skin and the like. When all this had been entirely cleaned up, the train was permitted to pull on.

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After it had gone and we had cleaned up as much as possible with whisks, we took flaming torches and seared the ties and rails and removed all blood spots until there was no remaining evidence of the accident. These bodies were put together in caskets as carefully as could be and inasmuch as many were fragmented, experts were called in. We hired recognition men from various communities. I remember that one man, who had the ability of matching like tissues, came from Denver. Of course, you must appreciate the fact that many bodies were torn to the point where no recognition could be established. Some were so mutilated that the whole identity had to be made by dental records, but all the bodies were placed in similar caskets.

The Board of Education met and then had long meetings with parents of the victims. We allayed all hysteria and concluded

from every possible angle that this was purely an accident. The locomotive engineer said that the bus stopped. He knew it stopped because he saw it standing there, but because of a peculiar type of cloud formation that was hanging near the ground, the driver's view must have been obscured and as he advanced forward onto the tracks, the train struck the middle of the bus. We felt that inasmuch as this was purely an accident we should get the parties together and come to some kind of an agreement regarding the settlement.

We advised the parents against employing any attorneys and the remarkable thing was that the railroad gave the Board of Education the responsibility of adjudicating the losses. My personal responsibility was to adjudicate lost functions in those who had been injured. The families agreed to a reasonable settlement for those who had been killed. This whole case was handled through the understanding which the Board achieved with both the railroad and the families of the students who had been involved in the accident. To me, it was a very remarkable thing that we could conduct the whole accident as a school problem and have no hard feelings, no legal involvement, and no attempt at placing the responsibility.

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I feel that if there was ever a time when complimentary things should be said for a corporation, it was at this time. The Denver and Rio Grande Railroad, in my opinion, was most liberal. I think the parents should be given credit also for the splendid way in which they accepted our advice and brought about a settlement which was agreeable to all parties concerned.

There were three groups of students in this accident: those who were killed, those who were seriously injured, and those who had no injuries at all, or very minor ones. The bus driver was killed and most of the seriously injured were taken to the county hospital. Later these patients were placed in the hands of the doctors who the families desired should care for them. Many of the cases came to me. I received several pupils with broken backs and some with bad compound fractures of the extremities. Some of these patients were very disfigured, but

with plastic surgery and restorative types of procedure all the injured turned out very well. In fact, today, I have a number of this group on my patient list.

Airplane Accident

I have mentioned on several occasions the studies I have made and the meetings I have attended at Saranac Lake, New York. I met a great many notable men at these conferences. I have already made mention of the friendship I established with Doctor Roy Girdner and Doctor Homer Sampson. As I remember peculiar types of accidents, I recall a man by the name of Don Cummings whom I met at Saranac Lake. Don and I had traveled over various parts of the United States by plane in educational tours on the problem of silicosis. I remember that on one occasion, when we were a short distance out of Chicago, the plane hit a pocket and took a drop of a few hundred feet. I happened to be awake and still had my belt fastened, but Don, who was sitting on my right and next to the aisle, had taken off his belt and was slumped down in the seat, sound asleep. As I felt the downward cast I put my hand out to break the fall, but as the plane steadied and took to the air again Don fell out into the aisle.

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As he picked himself up he turned to me and said, "What happened?"

I answered, "Well , we just hit one of those little pocket businesses and had a spill, so to speak."

He said, "You know, Paul, if we stick with this thing long enough they are going to get us."

It was only a few months later that I received a call from Roy Gardner at Saranac Lake. It was still early in the morning in Bingham Canyon.

He said, "Paul, do you know anything of a plane being down?"

I said, "No, Roy, I haven't seen the morning paper. I have been operating all morning, but if you'll give me a little time I'll investigate and call you back."

I immediately got in touch with Western Airlines and found that the plane Don was on had left Salt Lake City around midnight, headed for Las Vegas, where he was to make an inspection of the magnesium plant. That plane had not been heard of since a few moments after its departure from Salt Lake City. I kept in constant contact with the airlines and with Doctor Gardner.

That afternoon a patient came in from Cedar Valley. He was on a horse and had come up over the divide into Bingham. I engaged him in conversation after meeting him in the examining room, and he said, "You know, I felt as I came up into the sagebrush country that I could see the tail fin of an airplane sticking up on the flat, off in the distance."

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In a few minutes I called the airlines and reported the incident, giving the location as somewhat south and east of Cove Fort. They informed me that their search plane had spotted the wreckage about twenty minutes earlier. I set out for the scene of the accident and was the first to arrive. A few minutes later the land crew of the western Airlines drove up and we got into the plane and found two passengers still living. All the rest, including the crew, were dead. I think one of the toughest jobs I ever had to do in my life was to remove the body of my good friend, Don Cummings. He was sitting in the seat that we always chose in a DC-3 plane, namely the single seat on the right hand side of the plane, next to the cockpit. After we had removed the body to the mortuary in Lehi, I called Saranac Lake and told Roy Gardner what we had done. Roy was most appreciative of this, since he and Don had been close to each other in their work, as well as being good friends.

Auto Accident

One of our more recent auto accident cases was that of Jean Margetts. This girl had been on a short trip with her fiancé. Their wedding was to take place in the very near future. We were led to believe that on their return into Salt Lake Valley, as they came over the summit at the head of Parley's Canyon, they both fell asleep. Their car went out of control and plunged over a steep embankment, overturning several times and landing in a deep gulch several hundred feet below the highway. The man regained consciousness sufficiently to free himself, but died in an attempt to reach the highway. Jean was pinned under the car, but with no severe pressure that would cause impairment of circulation and she was fairly well protected from direct exposure to the sun's rays. The days were very warm and the nights were freezing. The girl was asleep when the accident occurred and was rendered unconscious by the impact. She lay under the auto for a period of nine full days and was found in an unconscious condition at the end of that period. To our knowledge, this is the longest period a person has ever gone without food or water and been subjected to this type of exposure and still lived. She was removed from the site of the accident to the LDS Hospital in Salt Lake City; where it was found that she had multiple fractures and was in a general physiological state of imbalance.

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Through careful study of body chemistry, proper supporting with fluids, serum, albumins, and mineral balance, she was gradually restored to normal health. This case received great publicity and world-wide broadcasts. She had about as much publicity as the snowslide victims and the bus accident students whom we have mentioned previously. My daughter, Dr. Lenore, and Dr. Donald E. Smith[†] attended this case and their help was invaluable.

[†] Dr. Donald E. Smith was a specialist in Internal Medicine at the Medical Memorial Center and he assisted Dr. Lenore with this case.

Chapter 15: Bingham Canyon Hospital and Clinic Employees

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As I picture Bingham Canyon Hospital when I began my practice there in October 1922, I recall how very inadequate the general facilities were for taking care of people who were really sick. In an earlier chapter I have already made a few references as to how meager the equipment was. I mentioned that I scrubbed the operating room and introduced pressure sterilization. This little institution was merely a first-aid place with a kitchen, two small waiting rooms, two dressing rooms, an operating room, and a one-room clinic; there were twelve beds. It was under heavy indebtedness. These problems presented my first great challenge.

I stayed with Doctor Stroup until he was completely out of debt, and when that was accomplished I leased the hospital from him and started to develop it. It gradually grew into a clinic of seventeen examining rooms, two waiting rooms, dressing rooms, a complete laboratory, a wonderful diagnostic X-ray department, a modern operating room, and a fifty bed hospital with kitchen, dining room, laundry, and all modern conveniences. We renamed the institution "Bingham Canyon Hospital and Clinic" and it operated under that name for about

twenty years. We had a comfortable capacity for seeing from two-hundred to two hundred seventy-five patients a day, and it maybe interesting to know that our little hospital had an accreditation from the American College of Surgeons.

In this development we built on a fourth story, which was the home of the attendants. We had sixty-seven employees and five doctors. Through the years we have had many doctors with us and some have been very successful in their fields. They have told me on various occasions how much they have gleaned from their experience at Bingham Canyon Hospital.

At times students from the University of Utah Medical School have come out to us for training.

This little hospital received recognition in "Ripley's Believe It or Not." It was described as a hospital four stories high with every floor having a ground exit and a garden that hung on the side of a mountain.

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The employees in our clinic were an outstanding group and they were very congenial and helpful to each other. Some were with me many years and were always most cooperative. I think Miss Selma Pierson, my surgical nurse, was with me for sixteen or seventeen years and a more devoted person I have never known. She was there during the trying times of early organization, the years of poverty so to speak, the depression years when the sledding was tough. I have never seen a harder worker in all my life. Lucile Urich, who later became Mrs. John Hutchins, was just the same type of person. The whole continuity of the hospital was held together by people of that caliber. The whole staff were very cooperative and dedicated.

I would like to mention with special consideration the work that John Hutchins has done for me in the mechanical, electrical and general electronic fields. He was with me in Bingham and he has been most ingenious in helping work out in detail the problems of the entire development of the Memorial

Medical Center'. Never any problem is too tough for him to handle. He always says, "Between the two of us, we can wade through anything."

Elmo Nelson has been one of the most faithful employees I have ever known. He came to me as a certified accountant and has been with me twenty-three years. All of the business and accounting responsibilities of both Bingham Hospital and Memorial Medical Center have been in his care. When the time came that I had to leave Bingham, he worked faithfully on my old accounts and collected eighty percent of my outstanding bills. This was essentially my entire savings and was the money which I later used to help build the new group-practice center. He is still with me and is one individual who gets along with everybody. I have never heard anyone say an ill thing about Elmo Nelson. He has more patience than any other man I have ever known.

† In 1948 Dr. Paul closed the hospital at Bingham and went east to have extensive surgery on his hands for skin cancer. Upon recovery (1951) he went into practice with his daughter Dr. Lenore in Salt Lake City. A few years later they formed a group practice center which was called the Memorial Medical Center.

Chapter 16: Therapeutic Thoughts and My Garden

Ann has asked me to talk about some of the things that I have engaged in and to bring out the stimuli that activated me into undertaking particular activities such as my book and my garden.

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It was in May 1928 that I made my first transcontinental flight across the United States. The airship was a Boeing single-motored biplane and it was being used to carry mail across the country. Only one passenger was allowed per trip because of the heavy load of mail. It took twenty-two hours to complete the trip from Salt Lake City, Utah, to Newark, New Jersey, the landing field for New York City. I arrived at my hotel a little after midnight. Enroute, my luggage had been lost, and as I landed from the plane I was somewhat disturbed in my equilibrium. You often hear a man mention, after a long sea voyage, that he has sea-legs. After twenty-two hours in the air, I had air-legs and felt very unsteady in my walking and quite light-headed, and there was a restlessness about me that I had never experienced before. Having crossed the ocean twice and having experienced some tough storms at sea with no ill effects, this feeling somewhat disturbed and frustrated me.

I was very tired and went to my room, undressed, and took a hot bath and went to bed. I tried all the mental processes I knew to induce sleep but was unsuccessful, so I called the desk clerk and asked him to send me up some magazines. He informed me that the newsstand was closed, there was nothing he could send. So I searched around the room and found a Gideon Bible, and for the first time in my life I read the Book of Ruth. I read it and re-read it, and though I can't tell much about the contents I do know it was a very satisfying experience to have a book that I could pick up and read in moments of mental turmoil. It occurred to me that when my patients had restless nights and were apprehensive and their minds were full of anxieties that a book might calm them and perhaps induce sleep as the Bible had done for me. Next morning I conceived the idea of compiling a little book that a patient could pick up and in a moment could glean a thought that might be conducive to rest and peace of mind. Years were spent in collecting and writing little sayings that I thought might answer the purpose. In 1935 my book was ready and I entitled it "Therapeutic Thoughts." A volume was placed, on each patient's bed stand and it was very well received. About fifty per cent of my patients took one home with them and it didn't take long for several hundred copies to disappear. I have always taken my little book on trips and I still have one by my bed and each night I pick it up and read a few of the little sayings contained therein and gain as much joy and satisfaction from it as when I was compiling it for my patients' mental ease.

This book has fallen into the hands of many people and very often they have sent expressions of gratitude for its contents and the philosophy they have gained from it. I have always felt that our philosophies are what make us secure in life. They relieve the jolts and jars and take away our apprehensions, and they lend a tranquility that make life livable. They help us to meet life without rebellion and in a state of acquiescence, so we can feel that life is grand regardless of the problems and difficulties of this world that beset us from time to time.

My Garden

Since the beginning of time gardens have been most popular. In fact, the Bible is an accredited history of the beginning of the human race and it started in a garden. You may say it is a basic feature in life. I found the activities of a garden most intriguing and most challenging. Those who know the topographical features of the rocks in Bingham Canyon, the precipitous walls, and the barrenness of these rocks for lack of soil, can picture the difficulties encountered when I started to create a garden around the little hospital that had occupied so much of my efforts. The work started in a small way with six square feet, where I planted a few flowers. I could walk out and sprinkle these once or twice a day.

Gradually, at the back of the hospital, we built a veranda from which a cement stairway of seventy-odd steps led up to various terraces. These we had built with considerable difficulty. We drilled holes into the barren rocks with an air drill and placed perpendicular steel rods in these holes to the depth of several feet with steel extending several feet into the air. Back of the protruding rods, we placed planks and then we filled in back of the planks with soil. In this way we built up about two thousand square feet of soil bearing surface which would support lawn and flowers and in some places substantially sized evergreen trees.

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The placing and the covering of this entire surface with soil was a very interesting piece of engineering. Directly above the location where I had picked for my garden spot was a large area where scrub oak trees had been growing for years. This area was not quite so steep as the mountain behind the hospital. With the help of several men, we built long chutes on the mountain side (one chute was 800 feet long), and as we dumped the soil that we dug out from above into the chutes, it fell into garden area. By stripping a large surface of the ground above we were able to get a considerable quantity of fine mountain loam. It took a number of years to build this garden and to get the lawn to grow and to get a background of flowers.

It might be interesting to know how we got the grass started on the slopes between the terraces. Many of the slopes were forty-five to fifty degrees pitch and everyone, including the experts, said I would never get a lawn to grow on a pitch that steep. I packed the soil firmly, planted the seed, and stretched surgical gauze over the ground; then I placed another layer of gauze which was supported by a frame ten inches above the first layer. The lower gauze supported the soil so it would not wash away and it also acted as a mulsier to keep in the moisture, while the upper gauze acted as a means of breaking the force of the spray as I watered the lawn. I had no trouble getting the lawn to grow, and I felt this was a real accomplishment after all the discouraging advice that I had been given to me. My next difficulty was cutting the grass. The slope was so steep that I had to tie a rope, which was safely anchored, around my waist and go in with a hand scythe and cut the grass. I did this about once a year when the grass had reached a height of eight to ten inches. The rope was necessary, as I had no other way of hanging on every time I turned or made a move it seemed my feet would slip from under me.

On the top level we had our barbecue. It was an area forty feet long and twenty-five feet wide. This was built up by cribbing which we raised over a cement concrete wall that was forty feet high. I often had crowds of thirty to forty people to steak dinners and I thoroughly enjoyed donning cap and apron and serving the guests myself.

This garden that hung on the side of the mountain was a great feature in my life. Each night at 9 o'clock after completing my work at the clinic, I spent two or more hours with my garden. It was filled with flood lights and I could go out and work all night if I chose. Many times when my life was strewn with problems and weariness and sleep was impossible, I spent the entire night working in the garden. At five, or five-thirty in the morning, I would go into the hospital and prepare myself for the day's work. The relaxing activity and

my peace among the flowers and the beauty of the grounds had made me straight with the world again.

I found that my garden labors and interest were one of the greatest balance wheels that I ever developed. This was as much a balance wheel for my physical being as "Therapeutic Thoughts" has been a balance wheel for my mind. The only thing about the garden, I do not have its reality to exist with me. I have only a picture of it in my mind. I do have the book and I cherish it because it contains many of the wonderful thoughts that have been gathered throughout my life and they have helped me in times of stress and strain.

Anyone who has great mental strain and little physical exercise could profit by engaging in the activities of a garden.

After I left Bingham in 1948 Doctor Straup took over the garden and carried it on to great recognition. He had spare time and really developed it. One of the representatives of "Rome Gardens" went to Bingham and took a great many pictures of the gardens and they were published in that magazine a few years after I left.

Chapter 17: Mother and Humor

348 I always felt a little lack of closeness in association with Mother because my mind was often directed in channels of freedom from anxiety and I indulged in a type of thinking which Mother called smutty or adverse. Frequently when I told a story, Mother would say, "Paul, your Mother is a lady," and I think in her way she felt that I had a perverted mind. This point of issue existed for many years and then I remember receiving a post card which gave me great satisfaction. It was from my Mother, who was in California. On the right-hand side was my address and on the left-hand side was a birthday salutation with a nice little note bringing me greetings on my fortieth anniversary. As I turned the card over there was a sketchy, drawing, and I awakened to the fact that Mother had a sense of humor which was just beginning to erupt. The picture portrayed a bride raising the mattress with an oil can in her hand and she was oiling the springs. The inscription underneath said, "Silent Night." I remember the glee that came into my heart as I took the card in my hand and walked through the hospital with shouts of joy because I felt that at last my Mother understood me. I displayed it to seventy or eighty persons with the full conviction that Mother had run across something in her association with life that gave her spark of

the humor that was in her son. This gave me a great deal of comfort, because up to that time I knew she did not understand my feelings but thought I had a concept in my mind that was somewhat perverted.

My sense of humor was always a mechanism of relief from the stresses and strains of life, and I have always said, "Sorrowful is the day when I can't have six or eight good laughs, irrespective of the type of humor involved, in order to get some much needed relaxation."

I have always contended that there is a certain amount of filth or smut in every mind. To give it vent to bloom out in the open, and not be ashamed to let any man know that you have such a mechanism within yourself, is very gratifying. I feel that those people who are ashamed to dump out their garbage can, as I call it, are afraid to meet one of the greatest realities in the working of the human mind. To keep your garbage can clean is an adjunct to good living and how some people can go around with a pious face and a "holier than thou" attitude is more than I have been able to determine. Keeping the mind free is a means of avoiding malice and contempt and many of the attitudes that are induced to grow because of the fact that we hold things within ourselves in a cumulative fashion. The effect is often quite disastrous. 349

A few weeks after my fortieth birthday I received another card from Mother, and then I was thoroughly convinced that she understood the little touch or spark which gave me a great impetus in life. This was the picture of a German Dachshund that, in walking around a tree, ran into his own rear end, and he sniffed and thrust his nose in the air and said, "Well, I thought I knew every dog in town." This made me feel that Mother knew what was in my mind and that she had developed a tolerance for my humor. For years I was willing to let this little barrier exist between Mother and me, but now she seemed to understand the necessity of that little vent to keep me in a proper state of equilibrium.

At this point my only contribution to philosophy might be introduced. It is a little saying that hangs on my desk, "The Flexibility of your Adaptability is the true measure of your Intelligence." Mother' s inability to be flexible enough to understand my reaction to humor for so many years casts an interesting light on this little thought.

Chapter 18: Father

One day in the spring of 1929 when Father was eighty-two years old, he came out to visit me at the hospital. His vision was very poor and he couldn't read or see well enough to do any kind of work, and he had only four or five teeth. Things looked quite dark to him. I suppose the world would have looked black to me had I been in the same circumstances. This particular day, I remember he said, "My boy, I want you to pull the few teeth that I have left." So I gave him a local anesthetic, which he didn't want, and proceeded with the extraction.

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Years and years before Father, a practical dentist, had taught me to pull teeth, and at that time they did not anaesthetize. Usually the patient came out to the field with the forceps that Mother had given him at the house as she told him where to find Father. Watching Father was my early education in pulling teeth. He was very apt at it and he taught me many of the fine little tricks about to loosen the tooth and what stress and strain and what rotary and lifting movements to use to extract it without causing a fracture.

That day I pulled my Father's last teeth, and after the pulling bee was over he said, "My boy, that didn't hurt one

particle and I am glad you pulled them for me. You did a good job and I feel fine, only I'm getting tired of living. I can't read and I can't see to work and I can't chew. There isn't anything that I can do any more, and not being able to produce makes me feel so worthless."

I'll never forget the harsh words I said to him. They were: "Well, Father, I never dreamed you'd turn out to be a coward. Your family apparently has been a disappointment to you. Now that you cannot do anything, you want to pickup and leave us. Where has ever a family sought counsel as your family has sought it from you? What father has ever maintained the continuity, of the confidence of his children more than you have done practically every day of your life? What have any of us ever done that we have not come to you and opened up our hearts and asked for your advice before we have proceeded with any of our ventures? And now you say you have nothing to live for. Don't you think this is rather a poor concept of things? I say again, this is a cowardly outlook on life. If you could take your four sons and five daughters into your confidence and live their lives with them and see the many things they are accomplishing and the children they are bringing into the world—which is essentially a continuity of your life—you should feel that life is worthwhile. When you see the homes they are building, the reputations they are establishing, you have the life of a small multitude to live for, Father. All your children are actively engaged in things that are thrifty. You haven't a child that hasn't done something that is fine and of real magnitude in life; and see how many children have come forth from this family of yours. It seems to me that right in the full bloom of your life, you want to leave us. What nonsense for a man to want to desert a family as large as yours, with all the wonderful things they are accomplishing! Why can't you lay claim to these things? You and Mother are the ones who made it possible for all this to come about. I think you need to be impregnated with a stimulus and a motive to go on. You need courage, faith and confidence that life is fine and glorious because all these things are being accomplished."

From that time on, Father seemed to have a different attitude. He came to Bingham quite frequently to visit me. Often he would arrive in the morning and stay all day. He loved to be with me and go from room to room as I visited my patients. I loved to have him, because it seemed that this was an addition to his life, which he had evidently fallen short of reaching. I always look back on this one incident, feeling that it was the inaugurating into Father's life of an appendage which he himself had not been able to visualize. This new attitude has been very gratifying to me, and it made us very close in companionship during the last ten or fifteen years that he lived. Father and Mother were always a great stimulus in my life, and this extra closeness was very dear to me. It was only in his later years that I felt this was attained.

Chapter 19: My Hand Affliction

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In my work through the years I had had a great deal of exposure to radium and X-ray, both by faultily constructed machines and by use of the fluoroscope in setting fractures and locating foreign bodies. Due to this fact a great many ulcerated lesions developed on my hands. They were so numerous and so uncomfortable that during the last few years of my surgery in Bingham, I was unable to scrub up, except by using the finest Italian castile soap and a soft sponge, or a substantial piece of cotton.

In October of 1948 I went East and had my hands examined by several doctors and was told that I was facing the problem of malignancy. In fact, specimens were taken from several lesions and all were found to be malignant. On November thirtieth, 1948, I brought my work at Bingham Canyon to a final conclusion and closed the doors of the hospital and clinic.

On December sixth I left for New York City. Arriving there, I placed myself in the hands of Doctor William Stevenson. On December sixteenth, 1948, I underwent radical surgery of the left hand for removal of all lesions and the entire covering of all fingers and posterior portion of the hand by split skin

graft. From this operation I recovered very quickly, being in the hospital only three or four weeks.

My daughter Ethel and her husband, Alvin Baker, were located in Cambridge, Massachusetts. Alvin was attending M.I.T. I spent several days with them, renewing acquaintance with my little one-year-old granddaughter, Kathy.

Early in February 1949 I returned to New York for surgery on my right hand. These were long, tedious sessions, requiring many hours. Following the operations on my right hand, I had a neurovascular collapse and suffered a great deal of pain for several months. The whole program of this corrective measure was well laid out. The doctor said I could expect a disability of at least nine or ten months. I made all preparations to accept a disability of a year and a half. I practiced left-hand writing. Left-handed and right-handed signatures were placed in the bank so I could make out checks either way. My activities for diversion between surgery were planned. I visited with Ethel in Cambridge and with my daughter Lenore in Cincinnati.

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One thing that would seem peculiar to many people was the fact that I had no desire for any of my family to be with me while I was going through this trial. Lenore came on each occasion of large-measure surgery, which involved eight or nine hours, and Ethel came for two or three days during my extreme suffering, but other than that I cared to have no one around.

Due to ischemia, or lack of blood supply from long use of tourniquet during surgery, the terminal portion of my right middle finger fell off. The pain was terrific for nearly two months and they gave me large quantities of morphine and codine. After leaving the hospital, I spent long hours walking through Central Park[†], trying to nurse my difficulties and bring myself back to normal life. After fighting the drug

[†] Dr. Paul walked in the park for hours bouncing and catching a ball to limber up his hands and to keep them from becoming stiff. People passing him often shook their heads and twirled their finger near their ear as much as to say "He's balmy"—Paul got quite a chuckle out of this.

habit, I found that the greatest relief from pain was good old fashioned whiskey. Oh, how I lapped it up! In fact at one time I was afraid of acquiring the habit. But after the pain had sufficiently subsided, I immediately went off liquor and had no more difficulty whatsoever. I have never had a desire for it since.

In the terminal phases of this period I asked my brother Preston to come back and spend some time with me. This he did, and we spent two or three weeks together in New York and had a most enjoyable time. His visit was one of the greatest factors in my recovery, because I had been alone for so long that a close companionship was very, very satisfying. He was a busy man and I felt most appreciative of the kindness he showed by coming and spending that amount of time with me. We had always been very congenial and happy in each other's company and this brought us even closer together.

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One of the grandest things I gleaned out of this whole experience was the relationship I had with my patients. It was astonishing the way they rallied around me those seven or eight months of my confinement and suffering. I do not know how I could have managed without them. They showered me with the greatest kind of consideration; during the time I was in New York, I received over 3,000 letters and many, many gifts.

My hotel and hospital rooms were filled with remembrances and even now when I think of the many letters asking me to take courage and to fight to lick my problem because my friends and patients needed me, my heart wells up within me with thankfulness. The hospital attendants said, "We have never seen anything like it in our lives. We have had people get fan mail for a few weeks, but yours goes on for months and months. It is very unusual and very, very marvelous."

Following this period of disability, and to complete my convalescence, I went to Idaho and spent approximately twenty months on ranches that I held with my good friend Doctor

Rigby. My time was spent in the usual activities of farming and ranching, but principally in the breeding of fancy cattle. We acquired one of the largest herds of Anxiety strains of Hereford cattle in the United States. This activity became of great interest to me, and put me in contact with entirely new group of men. I traversed the entire United States several times, selling and purchasing cattle and attending cattle shows. The type of individual that one meets in this capacity is extremely interesting. I attended several conventions that were purely educational, and truly there is a lure about the type of life a cattle man leads which is most fascinating.

During the latter part of the period of convalescence, my daughter Lenore had been graduated from her long residency of surgery at Cincinnati General Hospital and was about to embark upon the practice of surgery. She asked me if I would like to return to my profession and help to give her a start in her work. This I was delighted to do, for I saw the opportunity of bringing into being a dream that I had cherished throughout the years.

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During my stay on the ranch, much of my spare time had been spent in drawing plans and designs for the establishing of a clinic, and by going back into practice I hoped to make these plans a reality.

My malignancy was arrested so I settled my affairs in Idaho and returned to Salt Lake City setting up a practice at 202 E. South Temple with my daughter Dr. Lenore.

Chapter 20: Vagabonding

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One of the many activities outside of my profession in which I engaged on first coming to Bingham was the Boy Scout work¹. They asked me to serve on the Boy Scout Council. I planned to go out once every year and spend a full day with the boys in their summer camps, where we could commune with nature. These camps were at Tracy Wigwam, Camp Steiner, or in the old camp in Butterfield Canyon. Camp Steiner, high in the Uintah Mountains, soon became a very favorite spot with me.

One of my enjoyable activities with the scouts was to go out in the woods and ask them to pick me a bouquet of wild flowers. When they returned from their quest, I would have them line up and file passed so I could examine the flowers that each one had picked. This activity was very interesting because I found that it indicated a cross index of the boy himself. Some would bring only three or four very choice blooms arranged artistically and carried carefully; others would have a whole armful of blossoms of every type jumbled together in a heterogeneous mass. These results led me into a very close study of the relationship of their personalities to nature. In this pursuit I expanded, my thinking to learn more about nature herself and to comprehend the relationship of man to the trees, flowers, rocks,

mountains, lakes, and all the glorious things that God has placed here on earth for us to enjoy and to make companionable. After this type of observation had become very close to me, I made it a point to spend from three to ten days every year in going off-by myself and losing myself in the depths of nature for relaxation and restoration of wholesome thinking.

I always used a five-passenger coupe car. The back seat was taken out and all my camping outfit loaded there. A tarpaulin, bed, stove, cooking utensils, provisions, high powered field glasses, galoshes, coveralls, pick, shovel, ax, and anything that might be needed to encounter the rough outdoors—were part of my equipment. I usually left with no dress-up clothes. Coveralls were my outfit and it was seldom that I even changed to a Khaki suit, and I never went indoors. Coveralls were used for the entire trip. This is what I call Vagabonding because most of the time I looked like an old vagabond. I would go around in coveralls, looking very shaggy and unkempt, and frequently I would not shave for three or four days at a time. My old slouch hat or cap added to the picture. My only way of washing or bathing was in an open stream, when a suitable place presented itself. I was very happy to do things this way, for I didn't want to be recognized, but wanted to partake of nature in as natural a way as she presented herself to me.

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These trips frequently were to Yellowstone Park which has become one of my favorite haunts and they have always been made in the fall of the year, preferably in October. I have camped out until the last few years; now a motel serves my purpose nicely.

The animal and bird life in Yellowstone has intrigued me greatly. I like to get off in isolated parts where I have no contact with any human being for days and see nothing but nature. From one campsite in the northeast corner of the Park, elk, bear, mountain sheep, antelope, moose, buffalo, and geese and ducks in migration have been visible through my binoculars. I always carry ample provisions and extra gasoline

†Dr. Paul was awarded the Silver Beaver award for his scout work.

(sometimes as much as fifty gallons) and am fully equipped to stay a week or ten days. On several occasions the terrain traveled has been so rough that the four extra tires which were part of my equipment, have been ripped all to pieces. I have been in Glacier National Park many times, in the Black Hills of Dakota, in the Rocky Mountain National Park of Colorado, in various parts of New Mexico, and in some areas of Arizona, and in most of Nevada. I have frequented the Grand Canyon of the Colorado on both north and south rims and have spent much time in the Kaibab Forest.

One of the outstanding features of the Kaibab is the bird life, especially the night bird life. I always plan to spend one night with the full moon in that territory. I take meat with me, either cured ham or fresh meat, whichever is most convenient to obtain, and place it as bait in trees surrounding an open space where I have made camp. To be on my bed in the open and watch the birds at night as they feed in the trees, is a great inspiration to me.

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Possibly the greatest source of comfort that I have received from this type of indulgence is that which I choose to call Communing with nature. I feel that the trees and peaks, as they cast out toward Heaven, are nature's cathedral towers and to me they form a natural place to worship. I feel very close to my God, and I feel that I can commune and converse with Him. Many a day has been spent in open conversation, either by speaking openly, or by seeking in an open type of prayer a feeling and desire that I might be brought to the realities of life, its purposes and its dedications. I am sure that this contact with nature has kept me more fit to play my part in my relationship with people, and it has given me a greater understanding of life's purposes, and a greater desire to serve my fellowmen. It has given me a greater concept of what God has done for us, and a greater sense of responsibility for what my motivations and activations in life must be. This fellowship with nature has helped me to impart a similar fellowship to my patients. It has given me a broader and keen understanding of things in general. It has given me humility

in my earnest desire to comprehend the deeper meanings of nature and, in the light of this understanding, to interpret more clearly the heartbeat of humanity. This association has given me a greater insight into the true purposes of medicine and a greater ability to accomplish a favorable end result with people in my professional associations.

These trips have always brought me back to my daily routine patterns of life with a greater determination, with stored-up enthusiasm, and with vigor that has lasted me throughout the year. I always look forward with great anticipation to the next Vagabonding trip, knowing what restoration it will bring and what satisfaction I will gain from it. The whole thing can be interpreted in one small phrase. It has been the means of bringing about the ultimate accomplishment in life and in happiness, with an enduring satisfaction.

In the early part of June 1957, I took my son Paul to Yellowstone. We were gone two days and had a most delightful time. At Old Faithful Inn we relaxed and had a period of complete rest. While we were there it snowed. When we left this area, there was three or four inches of snow on the ground, but as we climbed the Continental Divide the snow became deeper and deeper until by the time we passed over the top, there was eight inches of snow. This was the first time I had ever seen the Park in its celestial robes, and how wonderful it was, and how stimulated everything appeared to be! The trees were most vivid in their new costumes, and the animals seemed to be especially invigorated. We found them very keen, alert, and active as we drove along.

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I felt especially fortunate in having had experience in mountain travel over snowy roads. Bingham had afforded me that practice. Most of the cars were unable to make the grades but our car performed nicely and we had no trouble.

That day we traversed the greater part of the Park and drove out the south entrance into Moran. We visited the Jackson Lake

Lodge, which was built by the John D. Rockefeller interests, and spent some time there viewing the Grand Tetons. They have always been an inspiration to me. Our route home was down the south fork of the Snake River into Afton, Wyoming, and down to Cokeville, where we visited a few hours with Afton and Raymond Peterson, and then on into Salt Lake.

This was one of the most delightful two days of my whole life and I believe the only trip Paul and I ever made entirely by ourselves, except for the numerous trips to Mountain City, when he accompanied me on weekend inspections to the mine.

362 Another trip I made this year (1957) was in October, when my brother Willard and I went out the day after his birthday, October 4. We drove north, and as we came down into Cache Valley, Willard suggested that we go into Mendon. We spent two hours driving around and orienting ourselves as to the old homes, the public square, the farms, and various places that neither of us had seen for a great many years. We visited Father's old home, Aunt Ann Whitney's old home, Uncle Will Longstroth's old home, and several other places of interest. We also went out to Father's old farm where Willard as a young man had spent several years raising wheat and grains of various types. We located the old spring and talked about the old one room dugout that he established so long ago. It was gone but it came very vividly to my mind, for as a small boy I had spent a week or more on the ranch with Willard, and the dugout was our home.

We continued our trip into Yellowstone and spent the first night at Stage Coach Inn. We made an early start next morning and spent the day driving through the Park. This trip was also in the snow and it made me happy because Willard had never seen the Park entirely in white, and the numerous animals again were very interesting and alert.

This was a most enjoyable trip in bringing back into our memories the bygone days of the old home that Father had established when he was first married. This was also the

place where Mother Annie and Mother Louie had had a close association with each other. Louie taught school in Wellsville and used to spend weekends with Annie in Mendon just a few miles away. We visited, relaxed and rested and I know how delighted Willard was when he felt he had accomplished the end result of having me stay in bed for ten whole hours. It was very fortunate, too, because I really was tired when we started out on that trip.

Our second night was spent at the Worth Hotel in Jackson, Wyoming. Next day, we drove down the south fork of Snake River, and as we came up over the divide from Bear Lake into Logan Canyon, we renewed our impressions of that Lake. I know of no body of water in the entire world that has a greater reflecting ability. The shades of blue and green are unparalleled in any other body of water I have ever seen.

Those who have never paused on the mountainside at a high elevation to see the grandeur of this Lake have missed a great deal. Certainly any Utahan who has not acquainted himself with the unique artistic potentialities of Bear Lake should do so. 363

Willard and I were gone three days and it was a most delightful vacation. I believe this is the only time that the two of us have gone off on a real rest or pleasure trip with nothing to do but enjoy each other's company.

Chapter 21: Paul's Philosophy

My life's story brings out the fact that I have had extreme personal difficulties to face.

364 In my early youth it was my poor health caused by rheumatic fever and its complications. The terrible inferiority complex which resulted from not being able to attend school and compete with other boys my age was with me for many years. My stammering made it hard for me to express myself. Then later the fears of failure and the feeling that I would not live long enough to accomplish the things I wanted to do in life were outstanding problems. In the course of time, these problems were overcome.

The years of my great production were wonderful, wonderful years. Then in 1948, when my hands became bad, I was faced with the emotional and physical strain of cancer. It was not difficult at all to adjust to the idea of disability long enough to overcome my trouble. Up to this time I felt that my problems had all been successfully met, and when two years passed after the first operation for cancer with no signs of recurrence, I felt I was on the way to a new life.

My philosophy has always been that life is this day, this hour in which we are living, and we should make it as full as

possible. I have never wanted to relive any part of my life. Life is ahead, and the objectives and accomplishments of the past are only stimulating factors for the future and that, which can still be accomplished. In 1953, I was again faced with cancer and I am still faced with that problem. My disease has never been anything but under control, and we never know when it will break out actively again. For the individual who has never faced the cumulative problems of life, which we know have a time factor, it may be hard to realize the exaggerated uncertainty which comes from within.

I have now faced this for four years and it is a situation that no one can understand until he has faced it himself. It is a wonderful problem for the schooling of the mind the training of the emotions and the planning of the future to make it as full comprehensive and productive as possible. It gives one the desire to make every hour of the day as worthwhile as one can possibly make it, and to crowd in as much as is humanly possible. It gives one an understanding of the feelings of others who are facing this problem. I know it has given me far greater understanding in my practice of medicine. It has given me a specific example to bring to my patients who have great apprehensions about the loads they have to carry. Frequently I say, "Could I, just for one moment, present to you a little problem of mine? Consider it and embrace it from the point of view that it is your own problem, and see how you would handle it." As I present it to them, letting them know the privacy of my own thoughts, they say, "Well, we don't quite understand how you can carry your own load and our loads and be as happy and cheerful as you are."

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All I can say is that I feel it is a test to which we are put. It is a determining factor to see the quality of our make-up. I am convinced that we are all made out of the same material but certainly not out of the same quality of material. These types of situations are like the "cards of life," as they are shuffled to us. It is merely a fateful card that happens to fall to an individual just to see how he will handle the

situation. Will the problem be greater than he can manage or will he handle it wisely and prudently? This has revealed to me many important points of life. It is very necessary that we have patience, endurance, faith, confidence, and a determination to carry any load that life places upon us, when it is placed there under the logical burden of one of the responsibilities of living.

Cancer is one of the great unknowns. When it is thrown at us and we receive it as a reality, it becomes a great known and is really something to struggle with. It is a time when you look in the mirror at yourself and analyze the potentialities which are ahead. You analyze your own physical make-up, your physiological processes, and your own psychological processes and say, "Do I have it within my soul to keep all these factors in proper balance and equilibrium, and to go along as a normal individual and do my job in an honorable way?"

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One of the most important things that have come to me is my desire and willingness to pray, to pray with the faith and confidence that I will get an answer. I know that my prayers have been answered and that I have been endowed with strength, courage, and determination not only to face my own problems but also to help face the problems of my patients. Because of my greater understanding, my ability to assist my fellowmen has been increased. I have no malice in my heart to any degree over this problem. I consider it just as much a reality of life as the sun that shines or the trees that grow. There may be a lot of ugliness in this type of situation, but there is also a lot of beauty in it when you have the power to bring cheer and comfort to the people with whom you associate. The individual must not allow it to subdue and submerge him into a type of malice and vindictiveness which will inhibit his useful activities and make him a burden to himself and those around him.

I think, without the shadow of a doubt, that I knew little about prayer or its real purposes until this problem faced me. It has brought me closer to the reality of life than any other

one thing. It has brought me back close to my Mother[†], and she frequently comes to me to encourage me and let me know that I am doing the right thing. She comes back to me with the same fortitude with which she always came to me in my problems of life; I shall never forget Mother's parting words when I left her on the night of December sixth, 1948, as I headed for New York to undergo surgery on my hands. I told her there was a long period of disability ahead of me. She looked at me and said, "Well, son, remember your Mother will be waiting for you when you come back. And one thing further—I want you to remember this because it comes from my heart: you may not be able to see it now, but some day you will see that this is one of the greatest things that has ever happened to you."

I definitely remember my retort to those remarks. I said, "Mother, possibly I am stupid, possibly I am far beyond the point of comprehending, but at this time, I do not understand your point of view. I only hope, if that is your conviction, that some day I will be able to see it." Within certain realms, I now understand my illness from this viewpoint. It changed my life and my place of activity. It was the determining factor that took me away from the place where I had practiced for twenty-six years, and it definitely put me in a position where I had to make a new start in life. All my plans and procedures had to be reformulated. If this laid the background in which the final plans for the Memorial Medical Center were founded, then I can say that it has been beneficial, irrespective of the great adjustments it has demanded of me.

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Establishing the Center has been the greatest dedication of my life it is a great responsibility to try to direct young people into a more comprehensive understanding of life and to make them see the importance of their profession with its obligations and responsibilities. It takes extreme dedication to make the medical profession the greatest thing that can come into one's life. The opportunity of doing for myriads of people, things which they cannot do for themselves, to me, is

[†]Our Mother died in January 1951.

the greatest responsibility that can befall any man I say the individual then becomes the guardian, or parent, of not just a few, but thousands of people. From my way of thinking, I have become a parent over all those people who come to me for help, and I have often voiced that thought to them.

Chapter 22: Family

I enjoyed living in Bingham. It was the size of community that was easy for me and our family to adapt to. The children grew up in this cosmopolitan area, which was very friendly. Their primary and high school education was obtained here. At times as many as twenty or thirty different nationalities attended a school at the same time. This gave the children a very liberal and broad concept of the various types of people. Those of high and lowly means mingled together freely and our social functions were very cosmopolitan. The executive and administrative groups in the mines were of exceedingly high caliber, and they came from all parts of the country. We had groups of people with very numerous and diversified interests, background, and training. College graduates abounded in the community and our parties, both private and public, were of a very high type. We still attend a New Years Eve party with a little group that originated in Bingham. We have met together for thirty years, and I have never seen so much as one member take a drink of liquor. I could not say this for all the parties because at times liquor flowed quite freely, but the people were always sensible and knew how to handle this phase of sociability. It was practically never abused.

I feel it was a great privilege to raise my children in this type of background. They had the opportunity of meeting all kinds of people. They followed me many places where I went and they saw the bootleg joints, the moonshine joints, gambling dens, and honky tonks, in their very youthful years. This experience came in advance of their inquisitive period so that life sort of unraveled itself to them like a panorama, with no excesses nor indulgences. This prepared them to meet practically any and every situation in life on a very sensible and stabilized basis.

I think possibly Lenore profited more than the others from her background in Bingham, as she is the one who has traveled most. Also, in her profession as a doctor, she has been able to utilize both the understanding of human nature, which she gained, and the make up of the different races, which she knew, in adjusting herself to the great problems of life.

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Certainly among the greatest blessings I have ever had the privilege of enjoying are the three children who were born by Ethel, my wife Lenore. Ethel, and Paul from their youth have been vigorous, enthusiastic, and energetic. They are three very different and distinctive personalities. They have always appreciated their environment and have been very faithful to their mother, especially in the last few years since she has been so ill and confined to bed. I have never seen such devotion in children in all my experience. They have all taken many, many responsibilities which would logically have fallen on me, and have been faithful in those responsibilities not only periodically but every single day. Their vigilance and trustworthiness have been an example of the splendid teachings and training that their mother has given them.

Ethel, my wife, played a great part in adjusting herself and family to the type of life we led in Bingham. She was most devoted to her family and insisted that each Saturday the children spend the entire day in Salt Lake in educational pursuits of various types. They had dancing, piano, public

speaking, drama lessons, and learned all the various handicrafts that she could find for them to do. With this background, they took part in all the school, church, and social, activities in Bingham.

I cannot give too much credit to Mother Ethel for seeing that every opportunity was provided the children, in order that their lives might be well rounded. I am sure the children are most grateful for all the opportunities they have received. As they view their present positions and as they contemplate their future, they must give their mother credit for the persistence, diligence, and tenacity which she has established in them.

Ethel's loyalty in pursuit of opportunities for her family is only characteristic of her general make up. Outside of Bingham, she acquired a host of friends. These friendships have been most enduring and to them, she has shown the greatest type of loyalty. From them she has had a most pleasant background of social associations. The children were all graduated from Bingham High School and later from the University of Utah. Lenore became interested in dramatics in her freshman year, and her teacher, Maude May Babcock, told me on several occasions that Lenore was one of the few students she had ever had who made the University Dramatic team five years in succession. Lenore took her first two years of medicine at the University of Utah. At that time it was only a two-year medical school. Then she went on to Temple University in Philadelphia, where she received her doctor's degree. Her intern work was done at Cincinnati General and she also had one of the most technical surgical trainings that are offered in the United States. That is the Halstead method of surgical training which was inaugurated in Cincinnati University under the direction of Dr. Halstead. She graduated from surgical school with highest of honors - only woman at that time to achieve that goal.

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She was extremely diligent and very devoted to her patients. She was always very respectful to each and every individual

who came under her care regardless of race, color or creed. When I visited her in Cincinnati, I shall never forget in what respect and pride I held her as we made her ward rounds. I am confident that she gave the colored people just as much care as she did the whites in the Cincinnati General Hospital, and in numbers they were about equal.

372 This was her preparation for her practice when she came to Salt Lake City. For the past seven years I have been very closely associated with Dr. Lenore. We formed a full partnership in 1951, several years before the clinic was formed, and we have maintained that relationship in business ever since. Dr. Lenore is very diligent and she carries out a very methodical routine in her work. She treats me with the highest respect and I am sure she appreciates my judgment as she consults me frequently in all of her difficult problems. I greatly appreciate her consideration of me in our work and association. I value her most highly and respect her as one of the best surgeons with whom I have ever been associated. She has a technique and touch with a characteristic delicacy that only a woman can possess. She is a very splendid diagnostician and is devoted most sincerely to her work and holds the respect of all those who come under her care. She has built up a large practice and I can truthfully say I have never referred a patient to her who has not been entirely satisfied with the work she has done. They learn to love her very much. She stands high in her profession and is respected by all the doctors in the clinic as well as by the staff at the hospital.

She has just become a member of the American College of Surgeons and it was with great pride that the United Press photographed the two of us in recognition of that accomplishment. I am most thrilled with the success she has made and as an associate have found her to be ideal.

As soon as Ethel was graduated from the University, she came to work for me at the hospital in Bingham. She married Alvin W. Baker June 4, 1946 and accompanied him to Cambridge,

Massachusetts, where he obtained his doctor's degree in spectroscopic chemistry. He was graduated with high honors.

Ethel is a most inspiring little soul. She has a heart as soft and tender as one could possibly possess. She is lovable, cheerful, happy, and a stimulus to all who associate with her. Alvin is a splendid husband and they make a lovely couple. Twelve years of married life has brought them four children—two girls, Kathie and Susan; and two boys, Paul and Braddock. The girls are very active and progressive in their school work, and the parents are extremely interested and give them a great deal of assistance. The boys are active little fellows and all together they make a very happy family and have a splendid intellectual circle among themselves.

I have always appreciated going to their home and they seem to enjoy having me there. They are all interested in my welfare and display to me a love that is very gentle and congenial.

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Their home depicts Ethel's spirit, as she has transmitted her softness, gentleness, and kindness to all the members of her family. She is a wonderful mother, demonstrating all the love and affection that one can display. Her softness and gentleness are among her outstanding characteristics. If a man has what might be called a bouquet of life, she is certainly an outstanding flower in my bouquet, and I have always depicted her as such. She has a great future in instilling her philosophies and her choice characteristics into her offspring and all with whom she comes in contact. She is very stimulating to Alvin, who has one of the most intellectual minds I have ever contacted. She has been one of the greatest stimuli that have ever come into my life because she has given so much in return for the little things I have done for her. I am always prayerful that she will be able to make her life felt to the fullest in her children. The world has too few people like her and I'm sure she has a great mission to perform in this life.

The youngest of the children is Paul. He was always a very happy child and got along nicely with others. After graduating from the University of Utah, he completed two years of medicine but decided he was not fitted to be a doctor. When he entered hospital work, the emotional strains were such that he was unable to stand them. Even today when he takes care of his mother, it is very difficult for him to give her a hypo.

When he left school, he became a pharmaceutical salesman and continued in that work for several years and then decided to enter business for himself. He opened a little pharmacy just a short distance from the medical center and called it "The Medicine Chest." I am very happy to say that at present he is back at the University of Utah taking a course in pharmacy. He has almost completed his first year. After being out of school for nearly ten years, it was quite hard to get back into the swing of studying again. A few days ago he came to me and said, "Well, Daddy, I can come to you proud to say that I just received a report from all my classes and find I am head of my class." This thrilled me because Paul has never been too energetic in his schoolwork. He recited this little incident with a great deal of pride and I felt very keenly his position and responded wholeheartedly to him. If he once gets his feet entirely on the ground and feels secure, I am sure he will be very successful, as he has a wonderful personality and is very diplomatic. He has two lovely children—Paula, a girl of seven, and Clark, aged three.

They live in the duplex with us and we enjoy the closeness of their association. In problems of our home, Lola Jean, Paul's wife, has entered in and given a great deal of help in taking care of Mother. This I appreciate very much. Paula and Clark are also greatly interested in their Grandmother Ethel, and visit her frequently. They are solicitous of her welfare and wait on her with the greatest of care many times a day. Clark will run in from his play and say, "Nana, what can I get you? Can I bring you your pill? Can I get you a drink of water? What can I do for you?" He is a most stimulating little

fellow, and he is a great companion to his Aunt Nory as he calls Dr. Lenore.

They are a happy and congenial little family and are getting along very nicely. I am proud of them. I feel great credit is due Dr. Lenore for her attitude toward the grandchildren. Every year she takes the three oldest, who are girls, on a vacation. She spends from two to ten days with these children and has given them a very liberal introduction to life. They all love her dearly and the thing that I trust the parents will always give her credit for is the strict discipline which she demands of them. She holds their attention and she has their love. It is a love of reciprocalness which you seldom see. I feel that this is and always will be a most amalgamating influence in our family. I am looking forward to the time when the three grandsons will join this vacation period. I think it will be within a year. In fact, it is already designed. The plans are made to meet next February (1959), at Disneyland, and this old man, the pappy, is counting on a two-day vacation with them[†].

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[†] Dr. Paul was unable to go on account of his health.

Chapter 23: Old Home and My Sister Joy

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The things that are most certain in life are, that we live and that we have problems to meet and difficulties to overcome. We must learn to bring ourselves as agreeably as possible into a state of equilibrium of all difficulties that confront us. Without a doubt the health problem, with the complications that have arisen from illness, has been one of the most serious of my life. I have made mention of this on several occasions—how it affected my childhood, my teens, and my early adult life; the part it played in shaping my designs for the future; how it induced me into the study and practice of medicine. I have also mentioned the necessity of leaving my profession in Bingham in 1948, when I was confronted with malignancy of my hands due to excessive X-ray radiation and how after my operation I went on a ranch for two years. Here I formed a daily routine in the open air that I had not known since childhood, and this experience was a great factor in bringing me back into a state of stability.

In 1954 my cancer became active and several times I underwent surgery. It is hard to adjust oneself to those unfriendly conditions, because of the hazards which they carry and the emotional disturbances which accompany them. It is a real task

to make friends with such conditions. I am not able to say that I can make friends with cancer or that I can make friends with pain; yet they are in my life and I must recognize my mental and emotional processes and accept them. However, I am determined to carry on the pursuit to which I have dedicated my life, and that is to help those who cannot help themselves. This has really been a challenge of great proportions, but it seems that with each difficulty something enters into my life as a compensating factor and as a rehabilitating force.

In this last episode of being curtailed physically and mentally, each day I have come to the old home, the place of my birth, and the place of my early existence. I come into this sanctuary, where I have had the stimulus and the drive to emerge out of the darkness, so to speak, and to perceive the potentialities of the continuity of life, which is based upon faith, confidence, and determination. My own great desire is to continue to maintain my professional relationships with my patients and to care for them as one huge family. I always say that I have been a parent to multitudes, not to thousands, but to tens of thousands, and it has been because of this stimulus that I have wanted to carry on and the old home has been a great factor in this rehabilitation. It has given me the same setting in which I faced and overcame the problems of my earlier life. To come back here and to find the willingness of a spirit I have always known in connection with the old home have been a great joy and comfort to me.

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My sister Joy has been the one who has made all this possible. To her, I feel a terrific indebtedness, and I hope she can feel the deep gratitude of my heart, as I have no other way of offering her recompense. I hope she can appreciate what it has done for me because of my ability to continue in the thing that I have loved most in life, and that is my work. I want her to know, and I want the whole family to know, what the environment of the old home and Joy's devotion, which is one of the greatest I have ever known, mean to me. I appreciate these from the depths of my heart and it has

made the old home a place of sacredness to me. It is a great blessing to be able to come home from my work at the clinic each day and have a few hours in the old North Room where I was born, where I struggled for over three years to prepare myself intellectually for the task of entering Harvard Medical School, and where I endured much of my illness in childhood. And now, I am in that environment again to rehabilitate myself in order to carry on my responsibilities and my great desire to continue in my life work.

378 Joy has been unceasing in her endeavors to make the old home a place of welcome to me and to establish in it the atmosphere that we had in our childhood. She has gone to every limit to make the home attractive and the way she has fixed up the old North Room is something for which I must give her my greatest appreciation. She has always provided me with every convenience that I could desire, and her lunches have been wonderful. She has opened up her heart and home to me to such an extent that I feel as wanted and welcome as in the days of my youth. To lie here in my bed and look at the pictures of Mother and Father and Grandma and Grandpa Doremus, of Aunt Annie and of my brothers and sisters and some of my cousins, brings back many happy memories. I can see the old fireplace with the old irons around it, the old coal bucket, the old blower, and the old furniture that have been here for several score years. In the fireplace we have placed a gas log and the fire burns with nearly as much expression as did the coal fire in the days of yore. This is a most wonderful spot to me. I told Joy the other day if I do not die on the job, I hope to die right here in this room.

Chapter 24: Memorial Medical Center and Goals

In January 1951 Dr. Lenore and I opened up our office for the practice of medicine at 202 East South Temple in the office of Doctors Esther and George Gross.

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One of the finest moves I ever made in my life was to go into full partnership with my daughter. We shared and shared alike right from the start and we still maintain that association to this day.

My brother Willard and I built a clinic across the street from our old homesite and on July first, 1953, we moved into our new building. We used a piece of property which Father and Willard had acquired from Mr. Strevel of the Strevel Patterson Hardware Company. He had rocked up Parley's creek which flowed through the place and had landscaped it beautifully in anticipation of building a home there. We took the rear end of the property and built a two-story red brick building of approximately thirty thousand square feet floor space in which we have housed a group practice system. It is called the Memorial Medical Center in memory of Grandfather, Doctor Willard Richards, and his three doctor sons, Heber, Joseph and Stephen. These four men were very prominent in this great Utah commonwealth of ours and

it seems very fitting that we have established a group practice system of medicine in their honor.

We originally planned to start this group with nine doctors, but later decided to use fourteen doctors and two dentists. This has gradually increased until today we have twenty doctors and two dentists. The clinic has grown rapidly and it has a good potentiality of being a great medical center. Its greatest challenge is the working out of an appropriate practice of medicine which at the present time is a great unsolved problem in the medical field.

I have the responsibility of many people in this medical organization, and it is my duty, in my devotion to my work and to the young people that I have induced to come with me, to see that a strong basis is laid. I want to feel that my work has been rounded out so that my endeavors in the medical profession can find the completeness of the purposes for which they were designed.

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Trying to establish a recollection of life is not easy for me at this time, because bringing forth the past into the present does not make the future look too bright; but I feel there is still much for me to accomplish. I always had the assurance from Mother that I would live long enough to accomplish the things that my heart honestly desired. This promise is my greatest encouragement because many of the things that I have wanted to accomplish and still desire to do, have not been made clear to others. I feel it is only possible to propose the vision of one's mind to others as you feel their minds are prepared to receive the projection of your thinking. I think that sometimes we destroy friendship when we try to project our thinking to others further than their minds are prepared to digest the things that we present to them.

In these moments of emotional stress and strain, we are confronted with some of the problems that give us the real hazard of establishing a proper equilibrium. Our emotions,

our desires, our judgments, and our reasons in life are the things that are in constant conflict. And it is by bringing these things into proper balance, in a state of true and justifiable wisdom, that we maintain ourselves so that life develops a suitable pattern by which we progress. And again, as I bring my thinking to this spot in the North Room where I am dictating at the present moment, I feel there is no spot on earth where tranquility has been extended to me more completely than it has right here. I have always felt, until the last few months, that composure was best obtained out in the open, in the forests or mountains, where things were not contaminated by human environment. But here in this room I understand the need of humanness and I feel it everywhere. The room is saturated with human contacts. In my earlier life, the wilds were a refuge to me to get away from the stress and strain of contacting so many people in my profession. But here I feel I am absorbing a collection of all the humanities that my life has ever encountered, and they are gathered in this spot. Some day, lying here in the calmness of my own mind, I hope to plan the future and find the potentialities whereby the longings of my heart may be accomplished. It will have to come soon, because for the last six months I have been running with a timer set mechanism which is controlling my future[†].

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I would like to feel that everything that has been done to date, and everything that I may be able to do in the little time allotted me, will form a firm foundation of something that will go on and become great in the functioning processes of our profession, in the State of Utah and in the entire inter-mountain region. I have great hopes for the profession of medicine and feel that it will attract many fine minds to follow through on the things that we are trying to establish now. My desire is that this little Memorial Medical Center will grow into an institution that will carry out all the protective mechanisms for human life that the medical profession can properly administer to mankind.

[†] Paul dictated this just two months before he passed away.



APPENDIX III

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Mine Safety
In Utah

Winter Quarters Mine

On May 1, 1900, the central Utah mining town of Scofield was preparing to celebrate Dewey Day. Two years earlier Admiral Dewey had defeated the dilapidated Spanish squadron at the Battle of Manila Bay in the Philippines. The outpouring of patriotic fervor was also an excuse for a communal celebration, bringing together a town with a large number of immigrants. The sound of an explosion was thought by many in the town to be someone setting off a blast to honor the day.

384 A mile away, up a canyon, the high-altitude Winter Quarters Mine provided employment for much of the town. An explosion had ripped through the Number Four mine. According to the state coal mine inspector, "The blast shot down along the main and main back entries, and through all the rooms and entries of Number Four mine, gathering all the combustibles, such as dust, powder, etc., within reach." In some places, the coal had been cooked into coke, and timber props charred. Part of the blast came out through the Number Four surface entrance, turning the power house there into a pile of "broken and twisted" boards. Heavy mining carts lay askew on the rails that ran into the mine. One miner's watch had stopped at 10:28 AM, providing a precise time.

According to a witness in the town, "bye and bye there were seen women hurrying towards the mine and by their blanched faces one could read that there was something amiss at the mines." When word first came back to the town that Number Four had exploded, many did not believe it. Number Four was supposed to be the safest mine of the mines in the area owned by the Pleasant Valley Coal Company.

There were survivors, mostly men or boys who made it to the mine entrance within minutes after the explosion. One man, John L. Wilson, a mining cart horse driver, was working at the mine entrance when the explosion blew him 820 feet down the canyon. Though suffering a crushed skull and impalement in the stomach by a stick, he recovered, though he was expected to "never be able to do a day's

work again.” He also had no memory of what had happened. Another miner was thrown two hundred feet; having escaped injury, he joined the efforts to mount a rescue. Other miners outside the mine were also injured. Tom Pugh, a fifteen-year-old boy, was a mile and a half inside the mine, working with his father, when the explosion occurred. He immediately dashed for the entrance, his “hat in his teeth” to keep “his nostrils covered.” He covered the whole distance without a light and fainted on reaching the surface. His father perished.

Mine Superintendent Parmley organized a rescue party to immediately go in, entering in through the Number One mine entrance. The four mines were connected to each other underground. This initial effort was driven back by toxic gases, called afterdamp, that spread through the mine after the explosion. Further attempts also turned back because of the afterdamp. One young man, William Clark, desperate to find his father and brother, “dashed recklessly ahead to commence the search for his dear ones,” and the afterdamp overwhelmed him and he died.

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The rescuers decided to use the Number Four entrance. Fallen timbers and dead horses, used to pull the mining carts, were cleared away, allowing fresh air to flow into the mine. The rescuers first found a horribly burned miner still alive. The burns at first confused them as to the actual identity of the miner; they supposed that he was a man named John Kirton, while he was really named Harry Betterson. Taken to the boarding house in town, he died that night. Another man, William Boweter, was found sitting among the dead. After being revived, he walked out of the mine with “slight help.” He would be the only survivor from Number Four.

The rescuers used canvas to construct brattices to help force fresh air into the mine. Miners from the nearby Clear Creek mine arrived to help the rescuers remove the numerous bodies, most of them “more or less badly scorched.” The bodies were taken to a barn across the canyon bottom from the Number Four entrance, to be identified

and tagged as quickly as possible. Crying families waited for word that fathers and sons would not be coming home.

Miners were working both the Number Four and Number One mines that day. At first, the families of men in Number One "were not so much concerned," since the explosion had occurred in Number Four, yet as the rescuers passed from Number Four into Number One, they found more casualties. Thomas Livsey and his son William were found, badly burned, but alive.

386 Miners in the upper levels of the Number One mine had followed the standard practice of trying to get to the surface by the shortest route. That took them through the Number Four mine, where they encountered afterdamp. Among that toxic mix of gases was tasteless, odorless, and colorless carbon monoxide. All these miners succumbed and their would-be rescuers often found them in odd positions. One man had filled his pipe and was apparently ready to light it. Another man was eating a sandwich. We can imagine these men feeling fatigued and stopping to rest as the carbon monoxide displaced the oxygen in their red blood cells, slowly starving their body of the air of life. Many of the miners still held their tools in their hands; after dropping into unconsciousness, death took them. A later investigation determined that if the men had tried a different route, they could have survived. One hundred and three miners in the lower levels of the Number One mine survived with no injury; some of them were so deep that they were unaware that an explosion had occurred. Oddly enough, six horses emerged from the mine on their own after the disaster. No one had any idea where in the mine they had come from or how they survived.

Aftermath of the Winter Quarters Explosion

The mayor closed the town's saloons for a week as the retrieval of bodies continued. Many of the bodies had to be dug out from under fallen debris. The head of the company store hurried to Salt

Lake City to buy coffins and burial clothes. Salt Lake City lacked sufficient coffins and a carload of coffins from Denver was ordered. The manager of the mining company brought a train of doctors and other help from Salt Lake City, but only four injured men were taken back to St. Mark's Hospital. The bodies of the dead were washed as volunteers dug the many graves in the Scofield cemetery. Two large services were held four days later, amid a miserable spring rain, one conducted by a Finnish Lutheran minister and the other by several Latter-day Saint apostles. Fifty-one of the dead were taken to other locations, mostly in Utah, for burial by their families.

Two hundred miners died at Winter Quarters officially, though rescuers at the mine entrances counted 246 dead brought out. Many thought that bodies still remained in the mine. As was common at that time before child labor laws, some twenty young boys were among the victims. Sixty-two of the dead were Finnish immigrants, and a week after the disaster, the Finnish community claimed that fifteen of their countrymen were still missing. The mining company had no firm number of how many miners were in the mine that day, an astonishing lack of organization. Keeping such an accurate count later became a standard safety procedure.

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Such bland statistics fail to convey the true scale of the tragedy. For many families in Scofield, they had lost the breadwinner in the family. For too many, the disaster was even worse. In one Finnish extended family, an aged couple, brought over from Finland just three months earlier by their children, mourned the loss of six of seven sons, as well as three grandsons. All six of the sons and one of the grandsons left widows. Ten men from Ogden, all related to each other, with the last names of Hunter or Strang, died. A woman named Mrs. Davis had lost her husband and two oldest sons, aged 19 and 21, leaving her a widow with eight other children to care for.

Several of the speakers at one of the funeral services for the dead encouraged the survivors to not hold harsh feelings about the

company. The Pleasant Valley Coal Company spent \$25,000 on the funerals, buying the burial clothes and coffins. While some mining towns were completely owned by the mining company, renting homes to their workers and offering the only stores for buying food and supplies, Scofield was not that kind of mining town. The miners had the opportunity to own their homes and had more than just the company store available. The company store in Scofield did regularly extend credit to the miners and their bill was deducted from their pay at the end of each month; the company erased the \$8,000 of debt accumulated during the previous month, which meant that each surviving family received their full pay for April. Independent storekeepers took heavy losses. The company also gave \$500 to the family of each miner killed, for a total of \$100,000 paid out. This largesse by the company was not required by either law or custom.

388 Sympathy poured in from other parts of Utah and the nation. Three railroad cars arrived full of flowers, being sent by school children in Salt Lake City, with people along the track from the state capital to Scofield adding their own flowers to the load. Food and clothing for widows and orphans were sent from throughout the state. Relief committees in many Utah communities also raised funds through donations for fund-raising activities. A book, *History of the Scofield Mine Disaster*, was quickly produced by a resident of Scofield to commemorate the disaster, with earnings going to the relief effort, "for the benefit of the Widows and Orphans, left alone and fatherless, to fight life's battles, unaided by the advice of husband or father." A combined total of \$116,289.81 poured into the community from these efforts.

Though efforts were made to obtain financial help for the widows and orphans from both the state legislature and federal government, such efforts naturally failed. There was little precedent for government support in such circumstances.

Investigations afterward determined that somehow powder used to break coal off of the seam wall to be hauled out of the mine had

exploded. Coal dust in the air, as well as dust subsequently loosened, had probably expanded the power and range of the explosion. Fingers were pointed, often in sordid directions. Tensions between native-born and foreign-born workers were common at coal mines at the time and Mine Superintendent Parmley thought that the Finns had sneaked in extra quantities of powder in order to earn more money. Parmley's own brother had been the foreman of Number Four and had perished. The Finns were also accused of failing to help in the rescue work and taking clothing and shoes that belonged to the dead miners. In that time of ethnic animosity, such charges were certainly exaggerated, spread by biased journalism. Such charges also distracted people from more serious questions.

Had the coal company and the miners tried to keep down coal dust levels by regularly sprinkling the floor of the mine with water? Had safe ventilation been provided? Another nearby mine, at Castle Gate, had a policy of setting off blasts only when miners were not in the mine. Such a measure at Winter Quarters would have saved the lives of every miner except for those few who might have been in the mine setting charges. Of course, having all the miners out of the mine during blasting would slow down the work. The company wanted the mine to be as productive as possible, and the miners, being paid by how much coal they actually took out, also wanted to be as productive as possible. By buying their own tools and their own powder, the miners were effectively sub-contractors to the mining company. As such, miners at Winter Quarters had been allowed to fire off blasts on their own discretion at any time.

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A newspaper editorial demanded an extensive government investigation of the disaster:

One of two things is evident on the face of things. Either there was something wrong with the conditions[;] something that human foresight ought to have avoided, or else it is a clear case that every man who goes to work in a Utah coal mine absolutely takes his life in his own hands . . . there should be a calm and thorough investigation, and

the truth should be known so that if any added precautions can be taken, they will be insisted upon.

Official investigations absolved the mining company of responsibility. By the safety standards of the time, perhaps they were not responsible, yet an opportunity to learn from past mistakes existed. Another editorial argued that:

More lamentable than present death and suffering would be the failure to learn from this disaster, something in the direction of preventing such tragedies in the future. Some explanations must be found. Some responsibility must be fixed, either upon the victims, the Company, or the system under which coal is mined. For it will not do to go on taking chances with cheerful optimism while such calamities are not only liable to occur again at any time, but in any mine where similar conditions prevail.

390 Both federal and state laws existed at the time to regulate the safety of coal miners. In order to reduce fatigue, miners could only work eight hours a day, though miners were required by the company to walk into the mine to their work place and back out on their own time, so as to not cut into the eight hours. An 1896 law provided for a state coal mine inspector to inspect every coal mine every year. He could require improvements to the mine to increase safety, such as "additional machinery, shafts, slopes, tunnels, entries, means of escape or ventilation." Failure to make the improvements could result in withdrawal of state permission to operate the mine. Mines were required to have two tunnels available at all places and had to provide adequate ventilation by means of forced air. Each person required one hundred cubic feet of pure air per minute, while work animals required three hundred cubic feet. Noxious or poisonous gases were to be vented. Every fatal accident and every injury which prevented an employee from working for one week had to be reported to the inspector. Medical stretchers also had to be available, on hand, for employees injured in the course of his employment.

In 1891 the first federal law on mine safety required proper ventilation in underground coal mines and required that child

miners be at last twelve years old. During the first decade of the twentieth century, at least two thousand coal miners a year died, prompting Congress to create the Bureau of Mines. Though charged with researching ways to make coal mining more safe, as well as encouraging more mineral resource development, the Bureau was not given the authority to inspect mines until 1941. Federal acts in 1947, 1952, and 1966 implemented federal coal mine safety regulations. The Federal Metal and Nonmetallic Mine Safety Act of 1966 also extended federal safety oversight beyond coal mines to non-coal mines for the first time.

The Federal Coal Mine Health and Safety Act of 1969, known colloquially as the Coal Act, finally implemented strict federal rules for mine safety and required continuing efforts to improve safety. Financial compensation was also provided for miners who could show that they were completely disabled by "black lung" pneumoconiosis, a progressive respiratory disease thought at the time to be caused solely by the inhalation of fine coal dust. In 1973, the Mining Enforcement and Safety Administration (MESA) was created, separate from the Bureau of Mines, to avoid the conflict of interest inherent in the Bureau's mandate to regulate mine safety and worker health while still promoting mineral resource development. The Federal Mine Safety and Health Act of 1977 turned MESA into the Mine Safety & Health Administration (MSHA) while also moving the agency from the Department of the Interior to the Department of Labor. Annual mining fatalities in 1977, at the time of this last federal act, stood at 272. By 2000, annual mine fatalities had dropped to 86. Three mining accidents in 2006, including the Sago Mine accident in West Virginia that killed eleven with carbon monoxide poisoning, led to the 2006 Mine Improvement and New Emergency Response Act, further reinforcing federal oversight of safety in mines.

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At the time, the Winter Quarters explosion was the worst mine disaster in American history. Three later disasters exceeded the Scofield toll: 362 dead in Monongah, West Virginia, in 1907; 239 dead in Jacobs Creek, Pennsylvania, in 1907 (only thirteen days after

the Monongah deaths and only six days before Christmas); and 263 dead in Dawson, New Mexico, in 1913. All of these were coal mine accidents. Coal mining was considered more dangerous than "hard rock" mining because of the danger from buildup of combustible coal dust. Some hard rock miners flatly refused to work in coal mines, seeing them as too dangerous. As a further embarrassment, the new practice of collecting statistics showed that American coal miners were twice as likely to be killed as British coal miners, though American miners were more productive because of the more aggressive mining techniques that increased the danger.

392 On May 28, four weeks after the explosion, the Winter Quarters mine reopened for work. The company had a contract to supply the United States Navy with 2,000 tons of coal per day and needed to get the mine working again as quickly as possible. The Winter Quarters mine was the most productive coal mine in Utah and had produced 438,107 tons of coal in 1899. While many of the survivors swore that they would never work in a mine again, by then economic necessity forced them to reconsider and re-enter the mine. The company also installed "a watering system in all the Winter Quarters mines, so that every place can be sprinkled." The amount of powder that each miner could bring into the mine was also restricted. Eventually it became standard practice that explosions were not set off in mines occupied by miners.

A year later, miners at Winters Quarters and the nearby Clear Creek mine went on strike against the Pleasant Valley Coal Company. Many of the miners were new to the area and the strike was mostly about pay, though miners were also disgruntled with the high prices charged by the company stores. Scofield had independent stores, but Clear Creek had only the company store. They also accused the company of cheating at the coal scales where the company measured how much each miner had mined. Efforts to expand the strike by encouraging miners at other nearby mines to strike failed. Twenty miners at the Castle Gate mine who supported going on strike were fired by their

mining company. Mine owners and those who sympathized with their position argued that the striking miners were lazy, wanting more pay for the same work, rather than working harder. They accused strikers of getting drunk and thus being morally questionable people. They also accused radical agitators of instigating the strike and trying to organize labor unions. While that was untrue about this strike, there was truth to the claim in later strikes. They also accused the strike leaders of being foreign-born, exploiting the ethnic tensions that already existed. The strike failed.

Regular strikes followed, usually over the right to unionize and pay issues. In 1908, a speaker at a union convention in Denver observed "the average native of Utah is . . . the hardest bipped to unionize in all America." Both the Catholic Church and the LDS Church officially opposed unionization. For the LDS Church, the idea of a "closed shop" where an employee had to be a union member in order to be employed violated the right to "free agency" that all people were given by God. Latter-day Saint leaders often came from the ranks of business owners and tended to share the perspectives of business owners. Latter-day Saint leaders also found that fraternal lodges, such as the Knights of Labor, tended to be quasi-religious in the devotion that they inspired in their members, offering indirect competition to the role of Mormonism.

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More mining deaths occurred later in Utah coal mines, including 172 dead in a pair of explosions at the Castle Gate mine in 1924. The dead included 49 Greek immigrants and 22 Italians, as well as dead from five other nations. For comparison, during the World War II, 140 miners died in Utah's coal mines, compared to the 85 soldiers, sailors, and airmen from Carbon County who died in their country's service. In 1984, the deaths of 27 miners in the Wilberg mine reminded the people of Utah and the nation that coal mining was still dangerous. While some believed that occasional deaths were the price to pay in order to work in coal mines, others argued that more effective safety measures would limit these deaths. Union action

and legislative action gradually improved worker safety. Worker's compensation insurance and other forms of insurance, as well as federal and state welfare systems, provided more effective support for the widows and orphans of such accidents.

In a struggle that lasted three decades, unionization eventually came to Utah's coal fields. The story was a familiar one, with mining companies resisting the unions through the use of company spies, firing known union men, and sharing blacklists among themselves to keep out union agitators. The most effective technique was deliberately hiring different ethnic groups in order to use ethnic animosity and suspicion to divide the workers. Ironically, when immigrant workers did come to accept the union point of view, they proved to be tenacious supporters of their union, much more so than native-born Utahns.

394 **Crandall Canyon Mine**

It is instructive to look at a recent coal mine accident. Less than twenty miles from Scofield, still within the rich coal belts of central Utah, another mining disaster occurred at the Crandall Canyon Mine in 2007. On August 6 of that year, six miners died when the roof of their mine collapsed, causing such a strong ground vibration that seismographs at the University of Utah recorded tell-tale squiggles as if an earthquake had happened. Because the miners were four miles deep in the mine, hope remained that they might have survived the collapse, so rescue teams aggressively tried to reach the men.

The mine had been worked decades earlier, using the room and pillar method, which recovered over half of the coal in a seam, but left large pillars behind to support the rock overhead. A new owner chose to work the mine using the newer longwall method, which extensively used machinery to recover a greater percentage of coal from the mine by removing the pillars left from the earlier room and pillar

mining operations. The new method used a machine 800 feet long to extract the coal, allowing the roof in the exhausted part of the mine to collapse as the machine moved on. This accepted mining practice required care to not put too much strain on remaining pillars. An engineering firm developed a coal removal plan for the mining company, which was then approved by federal regulators.

If the plan was flawed or the miners took too much material too quickly, a remaining pillar might crack under the strain, spraying coal as the roof caved in. These coal outbursts (or "bursts") are dangerous, of course, and can indicate that the mining plan should be revised. The six miners were caught when multiple pillars failed, sending "violently ejected coal over a half-mile area." The miners almost certainly died instantly, though there is no way to be sure. Three of the six dead had Hispanic names.

Rescue efforts were mounted, hindered by the massive amount of coal that had to be removed to get to the site where the six miners had been. 395 Other efforts tried to drill bore holes directly down to the miners, in order to possibly give any survivors air and to drop down remote robot probes with cameras. Ten days later, two rescue miners and an inspector from the federal MSHA died in another roof collapse. Six other rescuers were also injured. All efforts ceased four weeks after the first accident. The bodies of the original six dead were never recovered. It was just too dangerous.

As further details emerged, the mining company admitted that three earlier coal pillar outbursts had also occurred. Because none of them involved any worker injuries, the mining company did not report the coal outbursts to MSHA, though federal regulations required such accidents be reported. While no one was hurt, these three coal outbursts provided strong warnings that the flawed mining plan was too aggressive and unsafe. By failing to report the earlier coal outbursts, the mining company avoided any possible MSHA investigation that might have found the flaws in the mining plan.

MSHA levied \$1,636,664 in fines against the mining company, Genwal Resources, mainly for failing to report the earlier coal outbursts and for failing to follow their mining plan, flawed as it was. Another \$220,000 fine was levied against an engineering firm, Agapito Associates, for negligence in developing the coal removal plan. In 2009, an umbrella settlement settled civil lawsuits brought by the families of the dead, granting the families an undisclosed amount of financial compensation in return for no admission of liability on the part of the mining company.

396 What had changed during the century that passed between the two mining disasters? The factors that led to the Winter Quarters mine disaster, including individual miners with their own blast charges and excessive coal dust, were common safety issues at that time, though more safety-conscious people had tried to solve these issues. State regulations even existed to encourage keeping down coal dust. If coal dust had been truly minimized, the Winter Quarters explosion would have killed a few men, not the two hundred who died because the coal dust amplified the explosion. In that sense, the Winter Quarters tragedy was an accident waiting to happen.

In the Crandall Canyon mine, the problems of coal outbursts were well understood and regulated by government oversight. Aggressive behavior by the coal company and engineering firm put lives in jeopardy. The MSHA "investigation confirmed that the mining plan was destined to fail." The reason that only six people died in 2007 and two hundred died in 1900 is that coal mining had changed from heavy reliance on human muscle to remove coal to reliance on large and extensive machinery. Modern coal mining in America does not require nearly as much manpower to continue to increase productivity.

Coal mining in 1900 was almost entirely governed by custom and tradition within the industry and by state regulations that varied from state to state. In 2007, while state regulations still existed, federal regulations and a federal regulatory agency (MSHA) had been implemented to provide a minimum level of regulations consistently

across the states, largely supplanting much of the role of the states. Even with extensive regulations, deaths still occurred in the coal industry. Various reasons for this have been given: coal mining is intrinsically dangerous and no effort can ever entirely remove all the risk; existing regulations are inadequately enforced; or further regulations are needed. Besides the risk of death, government regulation and changes in industry practices also improved the health of coal miners, especially with regards with such illnesses as black lung. Sufferers from black lung (coal workers' pneumoconiosis) suffer from the buildup of inhaled coal dust in their lungs. The Federal Coal Mine Health and Safety Act of 1969 dramatically cut the incidence of this condition.

What had not changed in the past century? Workers still died in workplace accidents. The word accident implies that someone made a mistake or something unforeseen happened. Clearly, at both Winter Quarters and Crandall Canyon, foreseeable mistakes had led to workplace deaths. What had not changed is that the coal industry was still dangerous work, compared to other contemporary industries, and tended to attract workers with more limited opportunities to find employment. A mixture of ethnicities were employed at both mines, often a precondition for deliberate manipulation of the workers, both financially and in terms of physical risk.

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Safety Culture

Much had changed in Utah during the century between the Winter Quarters tragedy and the Crandall Canyon deaths. Technological changes are the most visible, with the introduction of such transformative technologies as automobiles, airplanes, space travel, computers, and the Internet. The practice of medicine changed dramatically with the introduction of new drugs, such as antibiotics, and new techniques. Life expectancy increased, as did the human population of planet. Society changed with a reduction

in the number of children in families. The roles available to women changed, as feminism and technological changes created new opportunities. Sexual mores changed dramatically with the introduction of the birth control pill. A gradual change in attitudes towards safety also occurred, a shift that most Americans are unaware of. The extensive safety culture that we now have in America is the result of a profound change in attitudes, and Utah is part of this larger story.

398 Injuries and deaths in the workplace were considered routine in the nineteenth century and earlier time periods. Such accidents happened because a person was careless, their luck was not with them that day, or it was an act of God. If God controlled everything that happened, as many people believed, then injuries were His will and nothing could be done about them except for perhaps prayers asking for safety. One of the remarkable stories in American history, starting in the late nineteenth century, is the cultural change in attitudes towards worker safety. The economic historian, Mark Aldrich, wrote of this “shift in perspective from work accidents as routine matters of individual carelessness to the modern view that accidents reflect management failure.” We now “take for granted that companies are responsible for and will take due precautions to ensure the safety of their workers.”

By the twenty-first century, American society had reached a consensus that workplace safety was important, not to be left to the vagaries of life, and that for the most part, accidents were not really accidents. They were foreseeable risks that should be mitigated by appropriate changes in procedures and awareness training. Individual organizations such as corporations, government agencies, or universities, now employ safety specialists, who strive to create a “safety culture.” These safety professionals have an educational foundation in the form of college degrees and certifications in occupational safety, industrial hygiene, occupational health nursing, or occupational medicine. They redesign business processes and manufacturing processes, create and implement policies and procedures,

conduct outreach to employees and customers, and strive in all ways to promote what might be called the gospel of safety, the good news that accidents do not have to happen and can be prevented.

Bingham Canyon

An example of modern mining safety practices can be found at the Bingham Canyon mine. Winters Quarters and Crandall Canyon were both underground coal mines while Bingham Canyon is a giant open-pit copper mine. Despite the differences, the example does show safety practices in action. The mines of Bingham Canyon merged into a single operation after Dr. Paul left, as the Utah Copper Company gradually added more and more land to its expanding operations. The numbers of miners and their families also dramatically fell. Utah Copper Company later became Kennecott Copper Corporation. Kennecott continued to thrive, extracting ore that yields only 12 to 13 pounds of copper per ton of ore processed. Other minerals are also recovered, such as silver, gold and molybdenite, leading to further profit. The smaller number of workers and other people, as well as increased development of better roads and faster response meant that a local hospital was no longer needed by the Kennecott mines.

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Standard Oil of Ohio purchased Kennecott in 1981. An economic downturn led to the mine being closed in 1985. Three years later, having substantially modernized their operation, the mine reopened. In 1987, British Petroleum acquired Kennecott when they bought out the parent company. Two years later, RTZ Corporation, a large mining conglomerate based in Australia, purchased the Kennecott operations from British Petroleum. The merger mania that characterized the 1980s for so many industries was over for Kennecott. In 1997, RTZ changed in name to Rio Tinto. In 2003, the Kennecott Utah Copper Company produced 325,000 tons of copper, 570,000 ounces of gold, and 4,400,000 ounces of silver.

The pit held the title for the world's largest open-pit copper mine for many decades, and is still the world's largest excavation, meaning that more material has been moved there than anywhere else in the world. As the pit expanded, it absorbed the various communities of Bingham Canyon, some of them disappearing into the pit itself, while others were covered with the vast terraces of overburden rock. During this expansion, the company purchased any private lands in the way, dismantling the buildings. Highland Boy and Copperfield disappeared by 1960 and the last buildings in Bingham were torn down in the 1970s. Even the community of Lark, outside the mouth of the canyon, disappeared as Kennecott bought the private land, and while also moved the actual houses to Copperton so that their residents could continue to live in the area. In the end, only the former model community of Copperton remained.

400 Today, each of the four main Kennecott Utah Copper operations (the mine, concentrator, smelter, and the refinery) employs their own full-time safety engineer. There is also an industrial hygienist for the whole operation, who has assistants at each individual operation. Industrial hygienists are especially used in areas where workers might be exposed to toxic chemicals or other environmental hazards. Kennecott now also ties part of its yearly bonuses to safety measurements. The mine and the concentrator are MSHA regulated, while the smelter and refinery are OSHA regulated.

The current successor to the role of Paul S. Richards is Dr. Paul D. Harris, the clinic physician of the Kennecott Medical Clinic, located in Copperton. In 2009, the clinic also included a physician's assistant, two medical assistants, a physical therapist, and a few other support personnel. The clinic provides medical support to Kennecott mostly in the form of annual physicals and rehabilitation therapy. Emergency medical care is provided via ambulance or helicopter that take patients to the larger medical infrastructure in the urban areas of the Salt Lake Valley.

When Harris went to medical school at the University of Utah from

1980 to 1984, occupational medicine was not a field that students were “exposed to” that much. While working in an emergency room, Harris became interested in occupational medicine and applied to the Rocky Mountain Center for his residency. As was common, he earned a Master’s degree in Public Health (MPH) at the same time. On his graduation in 1990, he joined Kennecott and has remained there. In the past two decades he has seen further change in safety practices. Much of this change has been driven by the corporate parent, Rio Tinto. According to Harris, they are “very safety conscious,” disliking any industrial accidents. Besides analyzing the causes of accidents, Rio Tinto has encouraged its employees to be more proactive, where safety professionals go into the workplace to “visualize people actually working.”

Today safety at Kennecott is “a way of life . . . we don’t even view safety as a priority. Now, it’s just a basic value. Safety is something that should never change, priorities change, values don’t.” Kennecott now uses an acronym, TRACK, as a safety mantra. TRACK means:

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Think through the task(s)

- Think about each step in the task(s)
- Permits and authorizations needed to work
- Equipment and tools that are to be used
- Area personnel that need to be notified

Recognize the Hazards

- Check your work area is safe
- Check equipment and tools are safe
- Check energies and substances isolation
- Check above and below for potential hazards

Assess the Risks

- Could an injury or accident be avoided
- What equipment/systems could be damaged
- What are the likelihood and consequences

Control the Hazards

- Eliminate (Remove the hazard)
- Substitute (less hazardous chemicals)
- Engineering (guards, covers, handrails)
- Administration (JSAs, SOPs , permits, signage)
- Correct PPE (harness, glasses, gloves)

Keep Safety First in all Tasks

- Check for changes in work conditions (i.e., wind)
- Monitor safety controls for effectiveness
- If the task changes, reassess safety
- Continually reassess work progress
- Look after yourself and others

402 Modern standard operating procedure (SOP) documents have replaced the safety and operating rules books that the company used to issue to employees. These new SOPs are more numerous, more detailed, and even more concerned with safety than earlier rules. Kennecott no longer uses trains to move blasted rock from the pit to overburden dump sites or to the ore concentrator. Massive haul trucks are used instead, two stories high, weighing 350 or 400 tons each, with tires twice the height of a grown man. The manual demands: "Keep safety first and use TRACK in all tasks." Because the haul trucks are constantly in use and because the drivers have limited visibility behind them and to their right, Kennecott has created the "Five Cardinal Rules" that all employees must follow, whether on foot or while driving other vehicles.

1. Haul trucks always have the right of way.
2. NEVER pass equipment at intersections or while approaching an intersection.
3. NEVER pass a haul truck on the blind side without acknowledging your intention with the driver of the haul truck.
4. Drive according to road conditions.
5. NEVER park behind or immediately in front of a haul truck.

Other vehicles, such as pickup trucks, have a tall orange flag attached to them, making it easier for the haul truck drivers to see them.

While injuries still do occasionally happen, no employee has died in an accident at Kennecott's mine operation since 1988. Contractors on other Kennecott work sites have died, but they are not counted in Kennecott's totals because the liability and training are associated with the contracting firm, not Kennecott.

Like other industries in the Western world, Kennecott has adopted the use of personal safety gear, such as hard hats, steel-toed boots, safety glasses with side shields, goggles, gloves, suitable hearing protection, and air-purifying respirators. Employees are required to wear hard hats, safety glasses, and steel-toed boots at all times, unless they are in "offices, lunch rooms, change rooms, traffic control centers, clinic and fully enclosed and legitimate cabs where protection is provided." Because an employee cannot actually get to any of those locations without traveling through areas where protection is required, every employee has their personal safety equipment with them or nearby at all times.

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Getting to this point of safety was not always an easy path. Oddly enough, when the company pushed for more stringent safety standards, sometimes employees rebelled. In the late 1960s, the company decided that everyone should wear personal safety equipment in the form of hard hats and safety glasses whenever outside of offices or at company work sites. Salaried employees cooperated, but many hourly employees resisted. They found the equipment troublesome and questioned whether it was needed. This was a variation of the old assumption that the way to avoid accidents was not to make mistakes, rather than minimizing the impact of possible mistakes through safety gear.

Eventually the company had to take disciplinary measures against employees that refused to follow the new rules. Normally an employee would go to his union in this circumstance, which put the union in a "very difficult situation," because although the union knew such

safety measures were “beneficial for the workforce, many times they were themselves resistant to assist the company in our efforts.” The issue even became the subject of bargaining negotiations, “because of it being considered a working condition and therefore subject to bargaining.” The company did not relent, though the effort took many years to change the company culture. A Kennecott manager lived through this experience:

I remember by the late 70's, some employees, those that I would call the cement heads for lack of a better term, would actually remove the lenses from their glasses and put the frame on their face, or they were always conveniently in their pocket, but never on their face. I remember we used to issue written warnings and then progressively disciplinary time off. Later, when I was in labor relations, I remember conducting numerous hearings on refusal to wear personal safety equipment or absence of personal safety equipment, and sometimes they would conveniently put it on their body, you know what good are your safety glasses in your hip pocket or your shirt pocket? There was also tremendous resistance at the smelter in '69 and '70 to the use of respirators. We used to call them gas masks. Respirators were just coming into use, and prior to that we just had what would look like small feed bags, they were white cotton and you would tighten them around your head to cover your nose and of course your mouth. The acidic fumes would come underneath your chin or just underneath your lower lip. There was a solution that existed throughout the plant and you would always have several of these masks on your personage, they would get dirty but you always wanted to keep them moist because by keeping them moist it helped cut down all the acidic smoke and acid in the air. But there was just outright opposition to the use of respirators for a variety of reasons. People had called them gas masks and said that they were a bigger hindrance than help, and once again it became a matter of the company finally affecting very stringent policies. If you did not comply with those safety standards you were subject to discipline.

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The company had become converts to a safety culture, but the employees took some extra time to become believers. In the end, “a productive workforce and a safe workforce go hand in hand.” Because of their lack of personal experience with workplace accidents, many people do not understand, “even today . . . that when an accident

takes place how disruptive it is to the entire operation.” The modern understanding of safety is that “you cannot have a productive workplace without having a safe workplace.”

Kennecott workers today take pride in their modern safety record. They also delight in pointing out that workers are safer at work than at home. This is true for most workplaces in America; the home is the new dangerous workplace.



APPENDIX IV

...

The Rocky Mountain
Center

Dr. Paul and people like him had improved work safety, industrial medicine, and worker rehabilitation enormously in the first six decades of the twentieth century. In the decades that followed, even more impressive advances in these areas followed. Safety became a hard science, with reliable numbers and formulas to base decisions on, federal legislation assumed more control over safety issues, and the rocky mountain center for occupational and environmental health was founded at the university of utah. Dr. Paul's influence did not end with his death, because his richards memorial medical foundation continued to help these efforts.

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Safety Becomes a Hard Science

Safety science, the body of knowledge created by and taught by safety professionals, tended from the beginning to be about worker psychology and common sense. The focus was on why accidents happened. While psychology was useful in understanding why an accident happened, it was not as helpful in explaining why some accidents resulted in minor injuries and others resulted in major injuries or even death. This was a different question: how do we minimize the impact of accidents after they happen? In other words, maybe we should think in terms of injuries, rather than accidents.

Early leads came from an aviation medical doctor, Lieutenant Colonel John P. Stapp, who sought for ways to help pilots survive aircraft crashes. He wanted to know what stresses the human body could take, so he and his teams devised a series of rocket-powered

acceleration sleds than ran on rails, with braking systems to cause deceleration. Some tests carried only instrumentation, others carried dummies, and still others carried chimpanzees or human volunteers. Stapp found that humans could survive incredible forces if strapped in by webbing. He found that human tolerance to a decelerating force was "primarily determined by the application of force . . . and, secondarily, by the magnitude of force." He hoped that his tests would "lead to a great saving of lives and prevention of disabilities." Stapp used himself as a test subject and survived a test where he was accelerated to 45 G's, setting record still unbroken. For his record-setting sled ride, Stapp has been called the "fastest man on earth," which is not entirely accurate. The "man who survived the greatest acceleration" just does not have the same ring to it.

Stapp and others working on similar projects had come close to a generalized understanding of why some accidents were more dangerous than others, but not one had yet "made the essential connection that the prevention of injuries depended on the control of energy." While reviewing research on injuries for the U.S. Army, William Haddon, Jr., a medical doctor, made the connection and published a landmark article in 1963. Haddon later learned that a psychologist, James J. Gibson, had published a similar idea. Both Haddon and Gibson thought that the word "accident" prevented clear thinking about accidents, though a better term has not come into general use. Their key insight was that after an accident occurred, the extent of the injury depended on how much energy had impacted into the human body. This insight became known as the Haddon-Gibson formula. Makers of weapons had known this principle for millennia. When an object hits a human being, the effect of the impact will depend on the force of the object, which is mass times acceleration. Elementary physics students will also notice that this is Newton's Second Law, $F=ma$. In 1964, Haddon co-edited an influential textbook, *Accident Research: Methods and Approaches*.

To minimize injury from an accident, you must reduce mass and acceleration. In other words, measures to alleviate force in accidents were as important as measures taken to prevent accidents from happening in the first place. This observation seems so obvious, a matter of common sense, that is hard to understand that until the 1960s this was not perceived as wisdom with regards to safety.

This idea rapidly enabled major changes in America. Automobile companies had resisted seat belts for decades, arguing that driver skill was the key to preventing crashes. The Haddon-Gibson formula showed that seat belts saved lives if an accident occurred by reducing the potential for injuries. In 1966, Congress passed the National Traffic and Motor Vehicle Safety Act. Ralph Nader, a consumer activist and author of the landmark 1965 book, *Unsafe at Any Speed: The Designed-in Dangers of the American Automobile* helped push for the legislation. Also in 1966, Haddon was appointed as the first administrator of National Highway Safety Bureau, now called the
410 National Highway Traffic Safety Administration (NHTSA).

Science demands that experiments be repeated over and over again while altering possible variables. Experiments to test the effects of deceleration on the human body either required using animals or volunteers, as Stapp had done, or using cadavers. The problem was that the cadavers came in different sizes and weights and were too often destroyed during the test. What was needed was a mechanical human simulacra that could be reused over and over again, yet reacted like the human body would when exposed to rapid acceleration or rapid deceleration (hitting things). Samuel W. Alderson invented the crash test dummy in the 1950s for the Air Force to use. After the National Traffic and Motor Vehicle Safety Act in 1966 changed the legal climate for automakers, they needed a crash test dummy for automotive testing. Alderson provided one in 1968. This simple advance became the foundation for scientific, repeatable, and verifiable tests of seat belts, air bags, and automobile designs, directly leading to the safer automobiles that we have today.

OHSA, NIOSH, and Other Acronyms

The 91st Congress has been remembered as the “occupational safety and health Congress.” Deservedly so. This congress warmed up in 1969 by passing the Coal Mine Safety Act and the Construction Safety Act. In the 1970s, the two biggest changes, massive expansions of federal bureaucracy and responsibility, came with the passage of the Occupational Safety and Health Act (OSHAct) and the creation of the Environmental Protection Agency. President Nixon, despite his reputation as a conservative, supported these measures.

The key principles at the foundations of the OSHAct required the employer to create a safe workplace and expected employees to follow safety rules. Every employer was required to provide a place of employment “free from recognized hazards that are causing or are likely to cause death or serious physical harm” and to “comply with occupational safety and health standards.” Employees were similarly required to “comply with occupational safety and health standards” and to follow safety rules in “his own actions and conduct.”

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The OSHAct created both the Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH). Located in the U.S. Department of Labor, OSHA was responsible for the creation and enforcement of occupational safety and health regulations. In the U.S. Department of Health and Human Services, NIOSH conducted research and education on occupational safety and health. OSHA was not responsible for all workplaces; for instance, the Mine Safety and Health Administration (MSHA) was responsible for both underground and open mine operations.

The 1970s were an exciting time for occupational health because the momentum from the OSHAct brought funding into the field and there was a sense that many important accomplishments were happening to make workers safer. In the early 1970s, the American

workplace still had a lot of heavy industry, such as refineries, steel mills, and factories. Companies had “pretty good safety people that understood safety,” but they had “very little industrial hygiene, they knew very little about chemicals that the workers were being exposed to.” OSHA and NIOSH helped increase understanding of toxic chemical exposures for government bureaucrats, business owners, workers, and litigators.

In the last four decades, the American economy has changed, as we have “transitioned economically from that smoke stack industry where workers really had potential exposures to significant chemicals and safety hazards to an economy that’s based more on services.” Since the early 1970s, “activities in industrial hygiene” have “moved away from the more traditional in-plant workers exposed to chemicals, noise,” or other physical hazards, to “more concerns about indoor air quality issues, people in office buildings that complain about headaches or allergic reactions and that type of thing.” Today “regulatory compliance” is common and a major emphasis for both regulators and businesses.

The move from heavy industry to services-oriented industry has also reduced the influence and impact of labor unions in America. Back in the early 1970s, “worker health and safety” was still “a real source of conflict between organized labor and management.” Sometimes safety and health issues were used “as a tool between organized labor and management to negotiate contracts and things and not necessarily so much for the protection of the worker.” That kind of adversarial thinking has “evolved over the years” and now both business owners and labor unions have “recognized that employees are their most valuable resource and that they need to do everything they can to protect employees.” Labor unions always believed this, at least implicitly, but business owners now also recognize it.

Since OSHA began operating in 1971, workplace fatalities have been halved, while work-related injuries and illnesses have been cut by

40%. During the same time period, the total number of workers has doubled, which makes the safety statistics even more impressive.

Rocky Mountain Center for Occupational and Environmental Health

In the early 1970s, the Western Area Laboratory for Occupational Health and Safety (WALOSH), a NIOSH facility, was located in Salt Lake City. Two of the employees of this laboratory were Donald (Don) E. Marano and Jeffrey (Jeff) Lee. Marano had earned a degree in industrial engineering from Rutgers and served as a commissioned officer in the U.S. Public Health Service with NIOSH in Cincinnati, Ohio, before transferring to Salt Lake City. Lee was a native of Salt Lake City who earned a bachelor's degree in civil engineering at the University of Utah before going west to the University of California-Berkeley to earn a Master's of Public Health (MPH) and a Ph.D in industrial hygiene. After NIOSH was moved from the U.S. Department of Health and Human Services to the Centers for Disease Control (CDC), the new management decided to close down the Salt Lake City lab. Marano and Lee were scheduled to be relocated to other facilities when an official from OSHA approached them and proposed that they transfer to OSHA and found the OSHA Health Response Team, a "special team of industrial hygienists to function on a national basis to respond to emergency situations around the country." This move allowed the two safety professionals to remain in Utah.

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In 1977, NIOSH advertised for grant submissions to fund Education Resource Centers (ERCs). These organizations were to further fulfill NIOSH's mandate by conducting research and supporting educational programs. A major impetus was also "the shortage of qualified industrial health and safety specialists to meet the challenge of worker health and safety." Lee suggested to William (Bill) N. Rom that the University of Utah apply for such a grant. Rom earned his M.D. at

the University of Minnesota and later an MPH at the Harvard School of Public Health in 1973. A pulmonologist interested in occupational and environmental medicine, Rom was new to the faculty of the University of Utah. Rom, Lee, and Marano wrote an application to locate an ERC at the University. As government employees, Lee and Marano worked on the application after hours and not on government time.

The Rocky Mountain Center for Occupational and Environmental Health (RMCOEH) was established at the University of Utah in July 1977. In July 1978, the first two residents began their education. On September 1, 1978, NIOSH awarded the Rocky Mountain Center a five-year grant totaling \$3.3 million dollars. This ERC was one of eleven or twelve in the nation, later growing to seventeen in total. As happens with many government acronyms, the meaning of ERC changed, from Education Resource Center to Education and Research Centers for Occupational Safety and Health.

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Rom became the Center's first director, and Lee joined the Center full-time as its director of industrial hygiene and the University faculty as a clinical instructor. Mary Jo Bulbrook ran the Center's occupational health nursing program; Darlene Peay ran their certificate program, and Kathleen Bloesch ran their continuing education program. The Center offered a Master of Science degree in Community Medicine (MSCM), while Robert Parker at Utah State University ran bachelor's programs in "occupational safety and health," industrial hygiene, and safety engineering. The Center served the needs of Utah, Colorado, Wyoming, Montana, South Dakota, North Dakota, Idaho, Nevada, Arizona, and New Mexico. The Center concentrated its efforts on the "mining, manufacturing, and energy-related industries," because those industries employed "more than 40 percent of the region's workforce." A reflection of its efforts was found in some of the early studies that the Center conducted: "coal workers' pneumoconiosis, alkaline irritation to the airways from sodium sesquicarbonate known as trona, [a] SO₂

follow-up lung function study of copper smelter workers, and dental laboratory pneumoconiosis.”

Marano resigned from OSHA to join the Center in 1980 as a clinic faculty member. Lee and Marano, along with two other faculty members at the Center, also founded a private consulting firm, IHI Environmental, as a “direct” result of their work at the Center. IHI started as an industrial hygiene safety and environmental consulting firm that thrived and grew into a sixty-person company with offices in Salt Lake City, Denver, Seattle, Phoenix, and the San Francisco Bay. By 2009 they offered a...

...full range of consulting services for both local and national clients in the area of occupational safety, industrial hygiene, and environmental services . . . help people meet OSHA regulations . . . also help with contaminated soils and ground water, and help companies clean up and meet the requirements of the EPA regulations, underground storage tanks that might be leaking gasoline, and . . . also do some natural resource work such as mine reclamation or wetland delineation.

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IHI Environmental has continued to have a “symbiotic relationship” with the Center, hiring graduates, teaching courses, and giving guest lectures.

Marano eventually left the Center to work full time at IHI, but retained close ties to the Center by becoming a member of its advisory board and served for a time as advisory board chair. Lee died in 1998, of “complications from radiation treatment and chemotherapy treatment that he received” two decades earlier for Hodgkin’s Disease. Rom later left the Center in 1983 to work as a Senior Investigator in the Pulmonary Branch, National Heart, Lung, and Blood Institute of the National Institutes of Health, and is now the Sol and Judith Bergstein Professor of Medicine at New York University and Director of the Division of Pulmonary and Critical Care Medicine.

Organized labor also maintained close ties with the Center. Red Mayne, the teenager who had lived in the Bingham Hospital and saw

Dr. Paul as a father figure, now came back into the narrative. Red Mayne named one of his sons Eddie Paul Mayne, born in 1945, the middle name being selected to honor Dr. Paul. Eddie Mayne worked for Kennecott before entering union administration with the Utah AFL/CIO. Marano and Lee first met Eddie Mayne in the mid-1970s through Mayne's work as "Safety and Health Director" for the Utah AFL/CIO. Mayne was involved with the Rocky Mountain Center from the very beginning, serving on its advisory board. The Center advanced his concerns about worker rights, worker safety, and worker health. Mayne became the President of the Utah AFL/CIO in 1977 and served in that position until his death from lung cancer in 2007. He also ran for the Utah State Senate as a Democrat for District 5 (which covered Kearns, West Valley City, and Taylorsville) and served from 1995 until 2007. His wife, Karen Mayne, continued in his role as state senator, including winning re-election. Mayne also "served over 25 years on the Workers' Compensation Advisory Council" of the State Labor Commission (the successor to the State Industrial Commission).

416 Senator Mayne was widely respected and effective as a legislator, even with the handicap of being from the minority party in the state.

After going through two directors in only four years, the Center found stability with its fourth director in 1987. Royce Moser came to occupational medicine because he wanted to fly, but his eyesight was too poor for a traditional path to flight. Yet he also wanted to be a doctor. When Moser was a child, his doctor was concerned that he had rheumatic fever, and the numerous visits to the doctor prompted an interest in medicine by the young boy. Growing up in Versailles, Missouri, where his high school graduating class numbered less than forty students, his horizons were limited to getting into a state university. His mother encouraged him to apply to Harvard, since that eastern school was looking to diversify its student body. A full scholarship with room and board followed, and he traveled east. One of the pioneers of aviation medicine, Dr. Ross McFarland, taught at the Harvard School of Public Health and Moser realized that he could combine his dreams of flying with medicine by becoming a

flight surgeon. After graduating from Harvard Medical School, Moser joined the Air Force as a flight surgeon. His postings included service with the Strategic Air Command (SAC), the North American Aerospace Defense Command (NORAD), and a year-long tour in Vietnam. He finished his career with six years at the United State Air Force School of Aerospace Medicine (USAFSAM), including the last two years as commander of the school. As commander, he took his turn directing a twenty-year study on the health effects of exposure to herbicides, such as Agent Orange, on Air Force personnel.

After retiring from the Air Force in 1985, Moser came to the University of Utah as a professor to serve as Coordinator of Preventive Medicine Programs. Moser became director of the Rocky Mountain Center in 1987 and served in that position until 2003, having been the guiding force for the center for half of its existence. He served as deputy director from 2003 to 2009. His main research interests were “management of health and safety programs” and “disaster response and planning,” both of which drew on his extensive 417 command and management experience in the Air Force. His textbook, *Effective Management of Occupational and Environmental Health and Safety Programs: A Practical Guide* was published in 1992 and is now in its third edition. Moser also served as Vice President for Medical Affairs for the American College of Occupational and Environmental Medicine from 1995 to 1997. In 2002, he received the Rutherford T. Johnstone Award from the Western Occupational and Environmental Medical Association for his “long-term contributions to occupational and environmental medicine.”

Moser was succeeded as director of the Rocky Mountain Center by Kurt Hegmann, a past graduate of the residency program at the Center. Hegmann, a physician trained in the Medical College of Wisconsin, knew from the third year of medical school that he wanted to go into occupational medicine. He trained in internal medicine, since specialists in occupational medicine are trained in another medical specialty before becoming occupational medicine

specialists. After early research in the “health effects of mercury and PCB contaminated fish” among the Ojibwa Indians in the American Midwest, Hegmann turned to studying musculoskeletal disorders, especially back pain, a topic that is still poorly understood by medical science despite its widespread incidence. The odds for most people “of getting through life without back pain is probably close to zero.” He is also interested in “transportation medicine,” specifically the safety of commercial truck drivers and “what are the health standards we should have for those workers.” One out of every nine traffic fatalities is associated with commercial truck drivers, usually in the vehicles that are hit by the truck, not the truck drivers themselves.

Seeking Stable Funding

418 The job of director of the Rocky Mountain Center always involved worrying about funding, since the Center struggled with both staffing issues and funding issues over the years. While the Center received substantial funds from both the federal and state governments, it was never enough to meet their responsibilities. Dr. Moser, who directed the center for so long, recalls,

We kept trying to expand the program, but it was a real challenge. I've tried to get additional funds in various ways, and we would occasionally get a very nice gift of, say, sponsorship of a resident, which would free up significant funds. Then we'd just get that funded position up and running for a couple of years, and then it would go away and then we had to cover that shortfall. So the financial aspects of the RMCOEH it were always a challenge and are still a challenge.

As the University reviewed its priorities, the Center came under serious financial pressure in 2003. Just as Hegmann was assuming the position of director, a plan was proposed to drop the funding for the Center that came from the Medical School from \$250,000 a year to only \$46,000 a year. This cut threatened to force the Center to close in just two years as their funds ran out. The federal money from

NIOSH required a certain level of state support, and if that state support disappeared, then the NIOSH funding would be cut off.

The Center advisory board rose to the challenge.

Dennis Lloyd, Senior Vice President and General Counsel for Workers Compensation Fund, had joined the RMCOEH advisory board in 2000 and had extensive experience working with the state legislature. The Workers Compensation Fund (WCF) was a private corporation formed by the State of Utah to take over the responsibilities of the Utah State Insurance Fund, which had administered the workers' compensation system that had initially been established in 1917. As a private corporation with certain public responsibilities, the WCF is the "carrier of last resort," which means that any business or organization in Utah that must carry workers' compensation insurance can always go to WCF for insurance if they cannot get insurance from another private carrier. WCF must accept all applicants for insurance.

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The WCF had already become involved with the Rocky Mountain Center by offering scholarships every year for Center residents and students. These scholarships were named the Workers Compensation Fund Safe Workplace Scholarship Program. After Dennis Lloyd became aware of the Richards Foundation and the story of Dr. Paul, permission was obtained from the Foundation in 2005 to rename the WCF scholarships the Dr. Paul S. Richards Safe Workplace Scholarships. The legacy of Dr. Paul was honored by these efforts and WCF continued to pay the cost, which varied from year to year. In 2009, the scholarships amounted to approximately \$20,000.

Ed Mayne had been on the advisory committee for the Center from the beginning and now he was a respected state senator. Lloyd, Mayne, and other members of the advisory board began to seek ways to increase funding for the Center. They created an innovative method. Every employer in the state had to pay a premium tax as part

of the workers' compensation system. This was true for WCF, for other private insurance carriers, and for large organizations that were allowed to self-insure rather than contract for insurance from the WCF or other private carriers. The proposed legislation would allow employers to designate part of their premium taxes (one-tenth of one percent) to go to the Rocky Mountain Center directly. This was not an additional tax, just a small redirection that did not change the overall tax collected. The total revenue that the Center could collect from this source was capped at \$500,000. As Dennis Lloyd described it, "the idea here was that if the Rocky Mountain Center would survive, then it would survive because of the voluntary contributions of . . . the employer groups that saw the value of the Center."

420 This became Senate Bill 159, "Assessment Offset for Donations Promoting Occupational Health & Safety." Mayne sponsored it in the Utah State Senate, and Roger E. Barrus sponsored it in the Utah House of Representatives. Even though the effort to create the SB 159 bill began "in late October or November of 2004," the sponsors moved quickly enough to get the bill passed in the 2005 legislative session, held in the spring of that year. Such rapid "progress is very unusual," but the support of members from both political parties "made a big difference to us." The services that the Center had offered to businesses over the years, in the form of education and research, also impressed the legislature.

Some at the University of Utah were not happy that the Rocky Mountain Center had basically gone to the legislature on its own to obtain funding, rather than working through the University process in its combined efforts to lobby the legislature. In 2007, Senator Mayne and Representative Barrus built on the success of SB 159 by proposing and gaining passage of Senate Bill 234, "Occupational and Environmental Health Amendments." This bill made the Rocky Mountain Center into a statutory entity, the only ERC in the nation to have such a status, making it a matter of state law that the Center must exist. Threats to close it down were now useless. The bill also

codified into law the role of the Center and its relationship with the University of Utah. Part of the bill read:

Rocky Mountain Center for Occupational and Environmental Health at the university.

(1) There is established at the University of Utah the Rocky Mountain Center for Occupational and Environmental Health, to be an occupational health and safety center for education and research.

(2) The university shall operate the center in a manner so that the center is:

(a) eligible to be designated as an education and research center by the National Institute for Occupational Safety and Health in the United States Department of Health and Human Services; and

(b) a resource for affected populations to:

(i) improve workplace health and safety; and

(ii) contribute to economic growth and development in Utah and the surrounding region.

Senator Mayne was not feeling well at this point. He was later diagnosed with lung cancer and died on November 25, 2007. Among his many accomplishments for workers in Utah would be this final bill.

The Center also continued to receive funds from NIOSH. The Center is regularly reviewed by NIOSH, and every five years an application is made for renewal of the ERC grant. In 2007, the Center received its latest renewal, \$6.6 million dollars for five more years. As of March 2009, the Rocky Mountain Center employed 11 faculty members, ten full-time staff members, four part-time research associates, and three student research associates.

At the signing ceremony for SB 159 by Governor Jon Huntsman in 2005, Ed Mayne brought his father, Red. Members of the Richards

family involved in the Richards Memorial Medical Foundation, who had supported the Rocky Mountain Center, were also there. They met Red Mayne and learned his story and of his connection to Dr. Paul. Clark Richards, a grandson of Dr. Paul, and C. David Richards, a grandnephew of Dr. Paul, were surprised to learn of this connection. This is really not as surprising as it might seem. Lenore Richards and the other children of Dr. Paul, who would have known Red, were already dead. The time that Red lived in Bingham at the hospital happened before either Clark or C. David were born and they were still children when Dr. Paul had died in 1958. This touching connection between Dr. Paul and Red Mayne would have been lost, only remembered in the memoirs that Red had dictated for his family, except for the connection between the Richards Foundation and the Rocky Mountain Center. A sense of symmetry comes from realizing that Red Mayne, who looked up to Dr. Paul as a father, had a son (whose middle name of Paul was in honor of Dr. Paul) as interested in the issues of worker health and worker safety as Dr. Paul was.

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The circle was becoming complete.



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