A recent trip along Marburg Avenue in Oakley filled me with a flood of memories and a sense of angst. What had been such an imposing group of structures and activities was no more. Only a few remnants remain. The machine tool business identified with the Cincinnati Milling Machine Co. had been sold and was moving away.

I have always been fascinated by the evolution and life cycles of great companies. While at Harvard Business School, I took a course in Business History. Not only were there stories of great visionaries but also of scoundrels, raiders and plunderers. There was mention of closely held companies that went from "shirtsleeves to shirtsleeves" in three generations. This paper is not about corporate decline but rather my feelings as to what made the Mill, in the time I knew it best, a world class Organization that engendered so much loyalty among in employees. My reflections are about the conditions and critical success factors that helped the company grow. How did it gain leadership and dominance? There had to be some sort of special chemistry.

Since childhood, I was immersed in the life and culture of the Mill. My kindly, genial Uncle Fred had been at the inception of the present organization in 1884. He died in 1934 when I was seven years old-which makes me some sort of living fossil. I still have fond memories of him presiding at family dinners and of Christmases at his house. I remember attending some of the Christmas celebrations and Family Days. Father would talk a lot about the Old Timers group, which consisted of active employees as well as retirees with 25 years or more of service. It seemed to have a special meaning to all who belonged. I also remember the flood of 1937 and the role of the Mill in alleviating some of the hardships-providing water from the artesian wells when the water works was shut down and the foundry's pattern shop building a number of boats to help rescue flood victims.

I have especially poignant memories of riding around in the little switching locomotive that used to haul machine tools and castings on flatcars around the Oakley complex. The finished products were then transferred to the B & O Railroad yards adjacent to the Oakley passenger station. When I see the "big box" stores between Ibsen Street, Marburg Ave and 1-71, I fondly recall helping my Dad in laying out the landscape plan for the grounds by the new Administration Building and the various employee facilities behind. There were employee lodges, recreation fields, and tennis courts. We selected and identified the final locations for evergreen magnolias, pin oaks, willow oaks, shrubbery, pines, other ornamentals and hedges. This occurred in the Mill's main expansion just before World War II. How distressing it is to see this all gone now. Also, a relatively recent medical building named after Dad was demolished.

In this paper I will attempt to focus more on the human aspects of corporate development in lieu of the technical. Besides, without visual aids and the charisma of "Ducky" Wadsworth, the time limit for a budget paper would be vastly exceeded, if I

attempted to explain the functions and characteristics of the various product lines of the Mill. I don't wish to create a new cure for insomnia. However, for those who don't know, milling machines are used to cut and shape parts. They can also be used to make other machines.

There had to be some special chemistry between Fred Holz and Frederick A. Geier in 1884, the year that milling machines became the principal product of the original Cincinnati Screw and Tap Co., which later became the Cincinnati Milling Machine Co. As manufacturing grew, the operations were moved from downtown to a Spring Grove Ave. facility that was expanded several times. Soon this plant was becoming outgrown. F. A. Geier looked beyond the city limits to find a large level site in Oakley, adjacent to a railroad, which could accommodate a number of manufacturers, not just the Mill. Further, he hoped that worker housing could be constructed nearby. In 1911 the company moved to new quarters in Oakley on grounds comprising about 100 Acres. A power plant, The Factory Power Co. was constructed to produce the high voltage required to run heavy machinery. Additionally, a foundry, The Modern Foundry Co., was built to provide high quality castings for many of the products being made. My Uncle Walter (Walter H. Geier) ran this operation. Although my Uncle Fred's concept was initially considered foolhardy, it finally overcome objections from detractors and lured them to the siteamong them Cincinnati Bickford Machine Co., Alvey-Ferguson, Cincinnati Lathe and Tool. Uncle Philip Geier (hereafter known as P.O. Geier) negotiated a deal with the B & O RR to provide trackage to the complex.

From the inception of the company, it is my impression from stories told by my father and others; there always was a balance between the technical people in the organization (their contributions were highly valued) and family members. They called each other by their first names and considered themselves part of an extended family. Fred Geier was a world traveler constantly on the lookout for new developments and yet was somewhat of a bon vivant. The Geier brothers were part of a close-knit family of ten siblings. Since their father died rather prematurely, they learned to support one another and this nurtured their ability to understand the importance of building relationships with others.

From the early days of the machine tool business, Fred Geier had a keen interest in the safety and welfare of his employees. He tried valiantly to minimize layoffs in what is essentially a very cyclical business. In the depression of 1893, many businesses, bank and machine tool producers failed. Uncle Fred found that during those hard times the bicycle industry was enjoying a boom. He sold many machine tools on extended credit to bicycle makers at the same time persuading his workers to accept reduced wages and scrip in lieu of layoffs. The strategy was successful and allowed the company to survive until business conditions improved. In April 1914, Frederick A. Geier asked his brother Otto to join the company and start an industrial medical department. My father took the title of the Mill's Director of Employee Services, an umbrella definition that covered labor relations and personnel, safety, contracts, attitudes and conditions. Otto had a strong interest in developing the highest human potential of the work force. He felt strongly that this objective could best be developed best by preventive health screening

and measures, providing a safe and friendly work environment and also assuring that open access to someone who could listen to their personal problems. There was always a friendly, open door to "Doc" Geier. He was patient and a good listener. Emotional health of employees mattered very much to him. The Doc was available to deal with family problems outside the workplace. During his tenure, Otto instituted cafeteria services to provide low cost, wholesome food to the workers and also to discourage employees from visiting the local taverns across Madison Road during lunch hour. Under his aegis, The Employees Health and Insurance Association was formed later to be called "Mutual Aid." This allowed employees a means to provide for themselves in times of illness, accidents or death and was very beneficial during the depression. Communication was very important too as was exemplified by publications such as "This Week at the Mill" and the monthly issue of "The Milling Review". Dr. Geier was also instrumental organizing recreational facilities, ball diamonds, tennis courts and employee lodges. The highest possible standards for cleanliness was maintained in the locker rooms and washrooms.

The sum total of these efforts created an intense sense of loyalty to the Mill and all that it represented. Absenteeism was very low even during the flu epidemic of 1919. Many parts of the medical practice were a precursor of the holistic approach.

Most employees felt that even in tough times management really cared about them. During the Great Depression Frederick A. Geier cut his salary by 80% and reduced dividends. Many members of management dug into their own pockets to help those laid off. Although the Depression was especially severe in America, some foreign countries were better off. Europe provided a source of orders. The Soviet Union, through Amtorg, its trading arm, made substantial purchases of machine tools to help its farm equipment production and other industrial products. I personally viewed many of these orders and realized how essential they were for the survival of the Mill. During this period several discouraged workers and their families left Cincinnati for the so called "workers paradise". I remember fondly how father managed to extricate them. One particular worker, Mike Decker, a former pattern maker and carpenter later helped create special woodwork and concealed cabinetry in my father's house on Upland Place. He was very happy to escape from Russia.

Frederick A. Geier died in March 1934. Frederick V. Geier, his son, succeeded him with Philip O. Geier as Chairman. Walter Geier retired in 1940. Rearmament for the impending World War II brought new prosperity to the Mill. Frederick V. Geier knew war was coming, so in spite of being called foolhardy by many of his peers, new plants new facilities were ready to handle the rearmament needs of the allies before the outbreak of war for the U.S. The long established training programs enabled the Mill to rapidly enlarge its work force in this period of emergency. Midway through the War America had procured the necessary tools for war production. The Mill then focused on using its manufacturing skills to produce many of the products, rather than just tools, needed for the war effort. A planning committee was set up to explore how best to diversify in order to offset the inevitable postwar boom and bust cycle of the machine tool industry. By late 1946 both my father and Uncle Philip had retired. In 1950, after brief World War II service, I graduated from Princeton's Engineering School and after an all too brief spasm of hedonism, I was urged by my father to spend a few years at the Mill to see if I had an

aptitude for the organization. I subsequently enrolled in the Mill's two-year training program. The outpourings of goodwill and friendship from employees towards me, "Young Doc", were embarrassing, because I had done nothing to deserve them. I did learn to respect and admire the Mill since family members were expected to go through the same training processes as other employees. Respect of peers had to be earned. Despite all the feelings I had for this institution, I kept hearing from employees and officers how much they missed Dr. Geier and that the Mill was never quite the same after his retirement. There are several Mill alumni at the Literary Club. One in particular, Alex Stolley started as a cooperative engineering student working in the Research Department. Later he edited and produced *The Milling Review* and *This Week at the Mill* under Dr. Geier.

In preparing this paper, I ran across a huge portfolio of letters to my father upon his retirement. In reading them, I began to more fully appreciate his contribution to the Mill and the subsequent outpourings of goodwill towards me. I am also deeply indebted to James E. Schwartz, the Mill's historian, for the timelines and his painstaking research, which bolstered my understanding and recollections. In closing, with your indulgence, I will read one of these letters the tenor of which was reflected in many others.

October 9, 1946

Dear Otto,

I hope you know how much your friendship has meant to me. All through these many busy years your kindliness, your interest, your tactful helpfulness, your encouragement, your cheerfulness and your downright humanness have helped me over many a high hurdle.

Your thoughtfulness in the little things - to my mind the mark of a grand soul - your doctor patience and understanding, have endeared you to me and to all of us here at the Mill. You retire knowing that the affection and good will of every single person you have come in contact will go with you to what we all hope will be a happy new chapter in your busy life.

We shall miss you greatly,

Sincerely,

Walter W. Tangeman