

Captive Supplier or Partner? Sears, Whirlpool and Washer Design

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Exactly eighty years ago the founder of a struggling manufacturing company approached executives at the prominent mail order specialist Sears, Roebuck to demonstrate an electric washing machine. Despite the number of electricians marketed since the first Thor appeared in 1908, Sears sold primarily hand-powered machines. Now Louis C. "Lou" Upton sought to list his product. Just thirty years of age, Upton possessed a "brilliant talent for sales promotion" [1, p. 1], and likely captured Sears' interest with an air rifle produced by the Upton Machine Company that sold well in the militaristic spirit of the age. Whether because Sears needed an electric, or because of Upton's persuasive qualities, Upton won a deal to supply some 25 machines per month.

To quote the corporate chronicle, this was "probably the most important announcement in the history of the Upton Machine Company and the successor companies" [8, p. 18; 1, p. 7]. Thus began what Lou's brother Frederick, who was secretary of the firm, considered "one of the finest business relationships that was ever put together, starting out in a very, very small way" [10, p. 14]. The agreement paved the way for the Whirlpool Corporation's long rise to dominance in the appliance industry, and apparently contributed very significantly to profits at Sears as well.

The Essential Relationship

Within months, economic conditions imperiled the Upton-Sears agreement. Wartime inflation forced the Upton Machine Company to request compensating price increases. A tight contract might well have doomed the relationship. However, Sears recognized the impact of inflation, and the relationship continued for decades, sealed by further handshakes rather than contracts.

Bearing the trade mark "Allen," the machine advertised in the Sears catalogue came in two models, a six-sheet tub priced at \$54.75, with the 12-sheet capacity model retailing at \$95.00, both expensive novelties when \$50 represented a reasonable monthly wage [8, p. 5]. Nevertheless, sales gathered strength during the wartime labor shortages and rising incomes. In 1919 Sears ordered "a good quantity" of machines, and began to extend credit for their purchase. The 1921 Sears model, presumably featuring the perforated-metal oscillating clothes container, painted metal cabinet sides, and completely enclosed working parts, aroused such enthusiasm that the retailer desired 15,000 machines, "more of an order than we'd ever dreamt of having at one time" [8, p. 28-30; 10, p. 14-15]. Far

exceeding the capacity of the small manufacturer, the order required additional production facilities. Sears agreed to finance the construction of a factory with a loan of \$75,000 at 6% interest for five years [13, 1920; 8, p. 30].

The new plant added capacity just as the post-war recession hit the appliance industry. National washer sales had almost doubled between 1919 and 1920, encouraging the order for 15,000 machines, but then fell 60% in 1921. Upton sales rose from \$493,000 in 1919 to \$957,000 the next year, then declined to \$361,000. At Sears, total sales fell from \$245 million in 1920 to \$164 million in 1921, producing a net loss of \$16 million; President Julius Rosenwald even resorted to pledging his personal fortune to reassure the public. Sears survived, but clearly could not sell 15,000 washers [14; 16; 7, p. 31-2].

When Sears sought to cancel the order, the Uptons' response reflected their personal philosophy. According to Frederick, "We thought it would never be good business to force anyone to take merchandise that they didn't feel they could handle, and so we agreed to cancel the order." However, without the sales to Sears, Upton Machine Company could never repay its loan. Perhaps recognizing that its supplier faced bankruptcy, Sears extended the building loan "until such time as the business came back" [10, p. 15]. Thus the crisis confirmed a business relationship based on trust rather than contracts. However, financial difficulties still remained: equaling 80% of the company's 1920 assets, the loan weighed heavily on any future income. In response, the directors proposed a 200% stock dividend, split the existing shares, and converted the loan to Sears equity, at the par value of \$10 per share [13, 1921; 10, p. 15; 8, p. 32]. Sears emerged holding one-third of Upton Machine Company stock, approximately three times the Upton family holding. In Frederick Upton's words, it was "that wonderful marriage."

By 1925 the Upton Machine Company became Sears' exclusive supplier for electric washers, though it continued to produce appliances under other labels. In part, the relationship rested on personalities: General Robert E. Wood, Vice President of Sears' own factories, liked the Upton brothers. More generally, he regarded suppliers according to the motto "give everybody a fair profit but demand quality merchandise" [23; quote: 10, p. 16].

During the late 1920s, washer sales soared at Sears. General Wood, when previously Vice President for Merchandising at Montgomery Ward, had recognized that urbanization and the automobile were changing America's shopping habits, especially for durable goods. Ascending to the presidency of Sears, he established the first Sears retail store in 1925. Others quickly followed, and by 1930 retail sales accounted for half of total volume. Upton washers sold so readily that production rose tenfold. Profits soared, from \$42,000 in 1925 to \$117,000 two years later. Clearly Sears had done well when it turned a possibly unrepayable advance into equity.

Several sources credit Louis Upton with a major innovation that contributed to the rising sales. Dissatisfied with the performance of Sears' salesmen, in 1929 he approached General Wood to complain that "their display was terrible, [their] salesmen's knowledge of the product was incomplete at best and too often very wrong. As a result, they just were not selling the merchandise they should have sold" [10, p. 24]. In response, Wood offered to let Upton manage sales. Thus a small manufacturing company with little marketing experience took responsibility for sales techniques at America's retail giant. Upton formed a team of capable employees from both companies, assigned territories to them, and charged them to improve the salesmen's knowledge. New techniques and promotional materials

followed, and a later brochure noted that in 1930, sales rose 35% at Sears stores under Upton's direction, while washer industry sales fell 35% nationally. Sears reportedly adopted similar methods to sell other household products as well. Sears' sales of home laundry equipment reportedly jumped from 25,000 to 125,000 units under the program, but the retailer dropped it during 1932. Perhaps its lessons had already been learned [8, p. 45-6; 1, p. 7-8].

Even before these marketing innovations, great demand for the washers and the need to cut transport costs to Eastern cities led Sears to desire a second factory. To summarize a lengthy and complicated process, Sears' pressures led to a merger of Upton with a Binghamton, N.Y. manufacturer and thus formed the Nineteen Hundred Corporation. Although the Upton Machine Company disappeared and Lou Upton yielded the presidency, the Uptons and their allies at Sears controlled a majority of the company's common stock. In 1932, after lingering disputes over marketing priorities, Upton gained control. In 1949 the firm adopted the trademark of an early Binghamton washing machine as its corporate identity and became the Whirlpool Corporation.

Supplier and Retailer During the Great Depression

For most American industries, the Great Depression followed prosperous years in the 1920s, and home laundry appliances proved no exception. Value added within the industry increased from \$17.3 million to \$41.6 million, some 240% [16]. Upton profits climbed from \$42,000 in 1925 to an annual rate of \$300,000 by the first quarter of 1929. In an industry that grew remarkably – at Maytag, the largest firm, profits doubled – the Upton Machine Company performed spectacularly, a consequence largely of sales to Sears.

The Depression struck the industry quickly after the peak of 913,000 units shipped in 1928. By 1932 shipments were almost exactly two-thirds the 1928 level, mirroring closely the roughly 30% decline in real GDP. In the period 1931-33 nearly 30% of the firms left the industry. Amazingly, the Nineteen Hundred Corporation suffered only minor pains. Output increased to approximately 150,000 units in 1931, and despite the industry's extraordinary price cutting, the dollar value of sales rose 20%. Net profits soared to \$741,000 in 1931 but fell to \$376,000 in 1933. By contrast, industry leaders like Maytag and Easy Washer (Syracuse Washing Machine) cut or halted dividends [16].

Water Witches, Whirlpools, and Henry Dreyfuss

Technology and design aided the relatively successful sales. Very soon after the 1929 merger the "Water Witch," a longstanding Sears nameplate, appeared with an insulated tub as well as a new color, green. As image became more important to the public, in 1932 Sears commissioned the noted industrial designer Henry Dreyfuss to conceive an exclusive style of wringer washer. Dubbed the "Toperator," it featured smooth styling generally and all the controls grouped together conveniently near the wringer post [8, p. 48].

Ed Geldhof, later the company's Chief Engineer and "grand old man of the industry," described the era vividly at the Sixth National Home Laundry Conference in 1952: [5]

Many washing machine manufacturers quickly demanded that their engineering staff bring in the artist and work with him. Believe me, this was one of the most trying periods that any engineering staff ever experienced. Their domain had been invaded! Their high and might[y] decisions were being questioned! The precious nuts and bolts had to be hidden and ingenious mechanisms were no longer the main features of their products! All must be surrounded with slick lines, hidden fastenings, uniform themes, and a thing which had heretofore been made for basement use and strict utility, was now being introduced into the kitchen.... This was a hard period. What previously could not possibly be done suddenly became a reality. Men who bucked this trend failed to hold their position.

To twist Geldhof's wording slightly, in the case of the Toperator, what could not possibly be done failed to become a reality. Put into production in 1933, the machine failed to operate well. Two years later it was dropped.

Despite the fate of the Toperator, during the Great Depression technological improvements did render many existing machines outdated years before normal mechanical breakdowns. The adoption of a single-post, underwater agitator mechanism brought efficiencies in operation. Variations in tub sizes and enclosed wringers also appeared, to attract Depression-era customers to machines that only a decade previously had displayed open gears and other hazards. Changes in aesthetics and finish ("genuine white Dulux enamel") accompanied the functional improvements. Presumably firms invested in improved design partly because they perceived, perhaps mistakenly, that their customers would consider higher prices a minor obstacle to obtaining the improvements.

According to anecdotal evidence, production costs also fell because of the interplay of product design and technology. Sometimes simple sharing of parts brought economies of scale in new products. Often improved models cost less to produce than the ones they replaced. While designers improved the exterior to attract housewives, engineers simplified parts and production. The savings could be substantial. At the Nineteen Hundred Corporation, for example, costs fell \$4.24 per unit for the redesigned gear case, center post and pump drive, out of a total washer production cost of \$25-50 [8, p. 70].

The fate of the Nineteen Hundred Corporation depended even more remarkably on Sears in the later 1930s when sales tumbled for private-label machines and the Whirlpool-brand line developed at Binghamton. However, the hundreds of retail stores opened by General Wood, as well as efficient management and a reputation for quality merchandise stood Sears well during the difficult years, with a net loss only in 1932, when sales fell to only 50% of the 1929 level. Sears' success meant the Nineteen Hundred Corporation's share of national sales rose from ten to thirteen percent. Sales to Sears rose from 58% of the company's total in 1930 to 82% in 1933 and 92% by the end of the decade. Without exaggeration, the link saved the Nineteen Hundred Corporation. Indeed, as World War II loomed and appliance sales boomed, the St. Joseph plant became the largest producer of washing machines in the world.

Deliberately Developing a Qualitatively Inferior Product: The Jeep

Just as prosperity seemed habitual to the Nineteen Hundred Corporation in the late 1930s, technology offered consumers an alternative to the wringer washer. Several automatic washers appeared on the market, notably the Duomatic, a horizontal design from Bendix. Automatics banished the tedious and sometimes dangerous task of feeding wet clothes through the wringer, and cut work time dramatically. The appearance of the first automatics caught the Nineteen Hundred Corporation unprepared. Throughout the Depression it had refined wringer models and lowered production costs. This matched Sears' emphasis on low prices for good quality, but as a consequence the company had not attempted to develop the next product to sweep the industry. Indeed the Policy Committee only responded to this potentially devastating threat in 1938 when it authorized research and engineering work. A successful automatic would require years of testing. Meanwhile, as a supplier without its own significant brand, the Nineteen Hundred Corporation risked an impatient Sears turning elsewhere. Dr. Albert Snow of Sears' Development Department exerted considerable pressure to have one built [4, p. 16].

It seems hard to exaggerate the extent to which World War II spared the company from the devastating consequences of its technological indolence. In early 1942 the government halted all washer production, thus depriving Bendix and others of a significant competitive advantage. However, it later permitted engineering work to continue, and the Nineteen Hundred Corporation ordered its recently hired Chief Engineer to develop an automatic washing machine.

By all accounts a crucial figure in the history of Whirlpool, P. Eduard (Ed, or Dutch) Geldhof had joined the Easy Washing Machine Company of Syracuse in 1921. Three years later he became Chief Engineer, and by 1926 produced the first spinner washer. A profitable machine, it helped Easy Washer lead industry sales until overtaken by Maytag in 1927-28. In the years that followed, Geldhof designed the company's entire line of products, winning recognition for their quality. He ranked, noted Frederick Upton years later, "with the finest engineers in the industry," and "[w]hen he came here, they lost their biggest advantage" [11, p. 20; 10]. The following analysis depends heavily on his own accounts of events [4, 6].

In 1936, Louis Upton visited Syracuse and persuaded Geldhof to change companies. A brisk and energetic man, Geldhof transferred to Michigan in early 1937. He soon moved the engineering department into larger quarters and quickly developed a spinner washer. A year later, the General Superintendent died suddenly, and Geldhof assumed that responsibility.

At the Easy Washer Company, Geldhof and his designer Luther Ringer had worked for a year on an automatic washer. Together in St. Joseph, the two men revised their ideas and designed a new model in late 1939, using existing parts where possible. Large and cumbersome, with a complicated mechanism susceptible to failure, it nevertheless worked, and won Geldhof and Ringer an important patent. Then they began to redesign the machine to wash as well as anything on the market, to rinse thoroughly, and to extract a volume of water equal to the best wringer.

For a better wash, the two men chose the proven and widely accepted agitator over the rotary spin washer. However, an agitator required the tub to spin horizontally to extract water. When clothes inevitably became unbalanced during a spin, the tub and entire machine shook violently, vibrating parts and causing the washer to "walk" across the floor.

To overcome the problem, Geldhof and Ringer suspended the basket and tub on three rods, each connected to the cabinet by rubber balls set at their ends. With the correct degree of elasticity, the rubber balls permitted some movement, but as they were compressed they dampened vibrations, leaving the washing machine cabinet stable. The solution remains widely accepted today, and won Geldhof and Ringer another patent.

When the government approved work on some thirty engineering models in 1943, another ingenious engineer from Easy Washer, Harold E. Morrison, directed the \$1 million project. The experimental machines were field tested in a variety of locations, from the local hospital and Coast Guard station to Lever Brothers laboratories and the Good Housekeeping Institute. Motors burned, belts broke, and minor service resulted in some twenty changes in design and construction. However, no substantial design flaws were detected [6, p. 2].

The field tests did uncover a distinct shortcoming inherent in automatic washers. Inevitably they consumed large amounts of hot water, but few homes had automatic water heaters. More often, hot water came from a 30-gallon loop in the coal or oil furnace that warmed water only on manual command. With their wringer washers, housewives had conserved both hot water and soap by draining the first wash water into a tub, and reusing it for a later load of darker fabrics. Recognizing the complications, Geldhof and Ringer designed and patented the suds miser, a two-way pump that drained soapy water into a tub and later reversed the flow for the next wash. Though not without drawbacks, in Geldhof's words the device "proved our salvation when our first automatic went on the market,[B]y saving soap and water we had a greater appeal to the mass market. I believe it was one of the most valuable features on our automatic machine" [4, p. 16]. Perhaps as important as the technology to the 90% of buyers who selected the option was the marketing program, "Suds Miser and the Seven Rinses" at a time when *Snow White and the Seven Dwarfs* was popular.

Scenting Allied victory in the spring of 1944, the company began to plan the conversion of factories to washer production. Upton and his officers expected high sales, for the war years had reduced unemployment, boosted incomes, and halted production of many consumer goods. However, this view was not then held unanimously. Indeed, Sears' great rival, Montgomery Ward, attempted to hoard cash against the recession anticipated by its chairman, Sewell Avery [23, p. 53].

Tooling began for the automatic immediately after the war, a decision apparently taken without consultation with Sears. However, in early 1946 executives at the retailer judged the automatic's \$85 production cost, and \$200 retail price, prohibitive for too many families [8, p. 101; 4, p. 19]. An alternative had also appeared, proposed by John Chamberlain, an inventor with the Cleaver-Brooks Company in Milwaukee. His design used entirely different principles. An oscillating tub washed the clothes, then a rubber bag used water pressure to squeeze the fabric dry. Chamberlain claimed he could produce it for only \$37. In retrospect a better promoter than engineer, Chamberlain won support from important executives at Sears, who then pressured Upton to perfect the model.

When Upton notified Geldhof that his department must develop the design, he bluntly refused. Geldhof distrusted Chamberlain personally. Moreover, his own experience with similar designs had produced several patents but convinced him that the rubber-bag washer would fail. However, given Upton's orders, Geldhof offered to devote the entire engineering department to the project, keeping only Luther Ringer and Harold Morrison to work with him on an alternative. In

Geldhof's words, "Mr. Upton misunderstood me and stated, 'You are very generous'...I think it is very fortunate that he did misunderstand me, because at the moment I was very close to packing my dolls and dishes and going home" [4, p. 22].

Thus throughout the summer of 1946, the engineering department under Charles Morganstern worked on the Chamberlain squeezer washer, a task fraught with many obstacles. Geldhof's account is no less interesting for its antagonism: "I was hearing rumors of constant model failure, water pump failure due to the tiny pump lacking pressure and the squeezer holding foreign materials in the heavily creased fabric...I also saw many Chamberlain people coming and going..." [4, p. 23].

Meanwhile, in a locked basement room in the administration building, Geldhof, Ringer and Morrison secretly built their "Jeep," a less expensive variation of the existing automatic. They finally overcame the vibration difficulties by attaching the basket, agitator and gear unit to a steel base and then bolting it to the floor. After nearly three months labor, the machine functioned "beautifully" though its slower speed did not extract water quite as well as the balanced machine.

The dramatic showdown between the squeezer washer and the Jeep forms a treasured company anecdote. In late summer, Sears executives recognized that delay left the market to Bendix and others, so they pressed Upton to perfect the squeezer washer. In turn, he scheduled a large meeting to reach a decision. Despite frantic efforts lasting until 4:00 a.m., the entire engineering department under Morganstern had failed to construct a functional prototype or to draft production drawings.

Facing failure, Upton turned to Geldhof. After dismissing the Chamberlain engineers, Geldhof quickly set the group off for the basement, where the Jeep was uncovered. It washed flawlessly, but clearly needed stabilizing during the spinning cycle. In a rehearsed operation, Geldhof summoned Morrison, who came equipped to drill two bolts into the concrete floor. Using the best equipment available, the drill "went through the floor like cheese" in merely twenty seconds. Convinced that people need not "rebuild a house to install a rigid machine," the group broke up. By noon the executives ordered the Jeep into production. It used assembly tools already installed for the balancing automatic, and thus recouped significant costs.

In April 1947 production models reached the stores, and Sears sold 20,000 Jeeps by the end of the year. In 1948 another 89,000 Jeeps "rolled" off the line, providing Sears an inexpensive washer that became "the most popular and generally accepted good automatic washing machine on the market," according to *Consumer's Research* [4, p. 25]. It continued in production until 1953, long after the non-bolted Kenmore Automatic – the machine tested during the war – appeared in 1948. Clearly Geldhof, Ringer, and Morrison had saved the day.

Meanwhile, the Bendix automatic that initiated the entire episode proved a disaster. Not only did it wash less well, it required an average six repair calls per year, a level beyond both customer acceptance and corporate ability to service and monitor the defects. From a peak of \$81.3 million in 1947, sales toppled to \$35 million in 1949, and the parent company soon sold the firm to Avco [6 tape 2 p. 3; tape 6 p. 8; 18].

From the perspective of Whirlpool tradition, the Jeep ranks as an inspiring success story. However, any historical account must include the contrary view. One executive present at the crucial demonstration commented, "Ed, you got away with murder this morning, as that machine will only sell for a short time. If we don't have

a balanced machine, we are out of business" [4, p. 25]. Moreover, installing the Jeep required great care, as the fate of the prototype illustrated. When it was moved a few days after the critical demonstration, the drill bit hit a rock in the concrete, which had to be reset [8, p. 104-5]. Elisha "Bud" Gray, later the Whirlpool CEO and chairman, recognized that "if it was put in wrong it would just shake the damn house down." Therefore Sears introduced the Jeep regionally, after the service personnel trained in Michigan. Even then, traveling crews from the manufacturer accompanied the inauguration.

By the standards of the late twentieth century, a product like the Jeep seems a predictable failure. Though mechanically robust and relatively cheap, the Jeep lacked elegance and sophistication. Technologically obsolescent in its very origins, it risked creating a poor impression of the brand. That it temporarily seemed a triumph implies that not all generations of consumers may thirst deeply for quality and excellence. In retrospect, the origins of the Jeep lie in Sears' understandable failure to read the postwar economy correctly. It was introduced to a nation whose last peacetime memory was the Great Depression, and whose economic leaders frequently predicted a recession with demobilization. If consumers remembered hard times vividly, price competitiveness would matter more than technological sophistication. In 1946 it seemed they might remember – and to its credit Sears was far more optimistic than its competitors. By 1950 consumers clearly possessed confidence. Sears' long-term retail success came with the Kenmore Automatic and Kenmore Dryer, not the Jeep.

Captive Supplier or Partner?

A portrait of the first three decades of "that wonderful marriage" between manufacturer and retailer inevitably shows an unequal pair. As the evidence above illustrates, Sears increasingly provided almost the entire market for Whirlpool production, and could have exercised monopsonistic powers as Montgomery Ward reputedly attempted with its suppliers [23, chapter 4]. Moreover, Sears held 35% of the common stock of the Upton Machine Company, giving it substantial influence over operations as well as policy. Nevertheless, the events narrated above suggest a relationship quite different from these supposedly deterministic realities. Clearly tensions arose between the two companies, but they were not always resolved in favor of the retailer. Moreover, the retailer significantly benefitted when its supplier went beyond manufacturing in three different circumstances. First, Lou Upton's marketing initiative resulted in a 35% sales *increase* as the Depression deepened. Second, he and his managers correctly judged that demand would expand, not contract after World War II, and set out to provide the products (and necessary capacity) customers would desire. Finally, for all its imperfections, Geldhof's Jeep ushered in the age of automatics, not Chamberlain's squeeze bag.

Two non-technological developments reinforce the conclusion that the two firms worked together with fairly little concern about the short-run division of profit between them. First, when demand proved strong in the later 1940s, *Sears volunteered to raise its prices* in order to pass along higher profits to Whirlpool. Elisha Gray relates the incident well:

We could sell everything we could make, and Sears could sell everything they could make. And General Wood said 'Look, this is the time when you press the market a little bit, we should raise our

prices, and you should charge us more, and make a kitty up and pay off the debt.' And that's what we did, and I recall, of course we had it calculated, that that wouldn't count as profit for bonus purposes because it was a windfall... [7, p. 29].

Second, and probably more significantly, Sears acquiesced in Whirlpool's decision to establish a dual distribution system by recreating the Whirlpool trademark as a rival to Sears' Kenmore. Admittedly, Sears executives misjudged their firm's abilities: far from opposing the scheme as a competitive menace, they did not think any other retailer could successfully compete using the same product through a dual distribution system. Ironically, though, the scheme proved successful for Sears as well as Whirlpool, apparently because economies of scale existed, and the Whirlpool line provided enough additional volume to realize them [20, p. 14-15]. Far from penalizing Whirlpool for launching the competing line, in the 1950s Sears selected the firm to absorb the Seeger Corporation, and in the 1960s Warwick Electronics, its captive supplier of television and other goods. Thus the close relationship of the 1916-1946 period continued, although Sears gradually reduced its holding of Whirlpool stock.

Judged by standards popularized in the 1990s, Sears and Whirlpool repeatedly broke the rules. Both firms repeatedly took decisions that appeared to conflict with either the shareholders' interests or the lowest price for consumers. By contrast, the rival retailer Montgomery Ward relentlessly squeezed greater profits out of its suppliers, yet came in distinctly second in the race to become the largest retailer. Sears and Whirlpool surpassed all competitors, and are thus significant oddities, even if the sample size is small.

A narrative filled with twists and anecdotes tempts the scholar to concentrate on details and ignore the larger implications. However, unless the sample size of one supplier and one retailer totally invalidates the exercise of judgment, the following conclusions seem appropriate to the broader issues of business strategy.

First, mutual trust was vital. Symbolized first by the renegotiation of the initial price and shortly thereafter by the understanding each side displayed for the other's difficulties during the 1921 recession, it permitted conversion of the Sears' loan into equity. The equity itself, though important, did not seem to play a crucial role between Lou Upton and Sears, though it did during mergers with other firms. During decades when that equity gradually declined, business continued without a contract. No doubt tensions and irritations existed, but integrity and good faith remained above reproach.

Second, each side showed a surprising willingness to learn from the other. It still seems astounding that Sears would ever consider allowing Louis Upton, founder of a manufacturing firm, to improve its appliance retailing. Perhaps the Whirlpool archival sources exaggerate its employees' accomplishments, but for Sears to accept the Jeep almost instantly reflects a learning curve so rapid the student must have trusted the teacher. Though less obvious in technical matters, the education worked the other way, too. Sears dispatched Elisha "Bud" Gray II to the Nineteen Hundred Corporation to maintain its contact there. Although his arrival displaced a distant relative of Upton's, Gray rose to rapidly to plant superintendent and eventually the presidency. As chief executive he worked with Sears on the mergers of the 1950s that moved Whirlpool from a washing machine manufacturer to the producer of most household appliances.

Third, it was distinctly not an arms-length relationship. Sears and the Uptons united to oust the Binghamton president in 1932, and men at many levels established close friendships with members of the other firm.

Fourth, beyond the character issues of integrity and honesty, particular personality features must have played important roles. Upton and later Gray exhibited warmth and valued human intuition rather than a cold accounting perspective. Interviews with past executives provide several cases when high-priced consultants opposed what would later be astoundingly successful policies, yet arrogance seems distant from the culture at Whirlpool. Louis Upton, who founded the firm, initially yielded the presidency to a financial investor. President during the 1920s, he accepted both the loss of corporate identity and second place in the Nineteen Hundred Corporation following the merger with the Binghamton firm. Likewise, in the 1950s when Sears encouraged another merger, Elisha Gray as president of Whirlpool stepped down, though he similarly regained his position.

Finally, one must not neglect the approach to profits. Compared to Maytag, Whirlpool accepted half the return on investment. However, its philosophy of lower prices yielded sales at perhaps twice or three times the rate of increase Maytag experienced. Though not the darling of Wall Street, Whirlpool certainly rewarded its investors – including Sears – in the long run.

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