

White Paper: Innovation at Massey Ferguson Ltd. – with a focus on the period 1960 to 1980.

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Innovation was never at the core of Massey's business. Re-engineering was.

'Massey Ferguson Limited' (MF) became one of Canada's largest industrial concerns in the 1960s and 70s specializing in the agricultural and construction equipment sector. Sales reached a peak of \$3 billion in 1976. Profits were at a record and 68,000 people were employed. Headquartered in Toronto, Ontario, Canada, MF was the oldest and largest industrial enterprise the country had ever produced. MF was Canada's first multi-national businesses, with a global presence, and as many thought, a great future. A series of financial difficulties led to the company being broken up and the assets sold. The corporate operating entity disappeared in the 1990s. Today the company exists only as a brand name used by **AGCO**, an American company headquartered Duluth, Georgia.

This White Paper explores **innovation at MF**.

- Are the reasons for MF's demise related to its innovativeness or lack thereof?
- Was MF an innovative company?
- How did MF's innovativeness compare with its major competitors?
- Did MF's management practices encourage or constrain innovation?

While the focus of the White Paper is on the period 1960 to 1980, the role of innovation dating back to 1847 is also examined.

To complete this White Paper, three ex-employees of MF held a round-table discussion of their remembrances of innovation at MF during the critical period, 1960 to 1980. Anecdotal information, supported by the completion of a survey on innovative management practices, provided additional insights into innovation at MF. The methodology is set out in the Appendix A.

Innovation, or the lack of same, was not the total answer to MF's demise but, as this White Paper points out, the lack of innovation had consequences throughout its history.

Executive Overview

The legacy of MF today lies only with the brand name Massey-Ferguson. The company, which began in 1847 as Massey, passed out of existence as MF in the 1990s. During its almost 150-year history it was always a follower and a copier of other's ideas.

MF's founders and second generation management - during the formative years from 1847 to the early 1990s - followed a pattern of product development which, while successful at the time, laid the seeds for a large problem down the road.

- Typically, Massey would copy American designs, perhaps purchase the patent if that was required, or simply buy the product and re-engineer it for Canadian and international sale. American companies, at the time, were not interested in accessing the Canadian market since it was too small and they had their hands full with the burgeoning U.S. market - so it was a win-win situation, for the short term.
- Even early acquisitions were aimed at 'buying' the newest idea – as in the acquisition by Massey of the Toronto Reaper and Mower Company. Product ideas were derived from others and not sourced from Massey's own in-house sources.

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Major lesson learned; a company lacking innovation at its core goes out of business sooner or later.

The lack of culture for in-house innovation was in many respects, set initially by both the founders; Massey and Harris, but their descendants carried on with the same practice. In-house innovation was not a priority even at the outset.

The remembrances of the group of three ex-employees of MF regarding innovation at MF were essentially the same. Simply put, there was no innovation at MF during the period 1960 to 1980, years critical to the survival of the company. The survey completed by the three ex-employees confirmed that MF did not have the management practices in place which would normally encourage innovativeness. The survey uses a 'score' to measure the innovativeness of a company. An overall 'score' of 60 or above is normally indicative of a problem with any company's management practices and should be a cause for concern. In this case the overall scores for the group of three were 91, 153 and 185, for an average of 153; a clear indicator of the lack of innovative management practices at MF during this time period; 1960 to 1980.

The management practices which we now identify as encouraging innovation in such outstanding companies as Toyota, GE, P&G, Nucor, and 3M, were simply not part of the original founders lexicon nor were these practices adopted by subsequent generations of management, with the odd exception.

While the 1960s and 70s, the focus of this White Paper, were generally good years for MF in terms of sales and growth, the legacy of debt and a management focused on everything else but innovation, had weakened the company and contributed significantly to its demise.

Are there some lessons which can be learned from this descent into oblivion? We think so.

The role of a holding company during times of crises.

- Is innovation impacted by a holding company (Argus with 17% in this case) which had little empathy with the business of manufacturing farm machinery and, further, insisted on a regular dividend even when the 'subsidiary' could not, or should not, afford to pay?
- If a manufacturing company has a majority interest held by a holding company or its equivalent, how important is it that there is a business champion representing its interests at the holding company?

Hiring talent.

- How wise is it to appoint a C.E.O. without experience in a company's industry he/she is expected to lead at a time when the company is in crisis?
- What does the appointment of an outsider reveal about a Board of Directors past decision making? Is there no one in the company with the experience or the talent to take on the most senior role?
- Should a family-owned business take steps early on to groom, not just a member of the family, but deliberately hire someone else to take over the management of the business? Succession planning should be done during corporate success, not at a time of duress.
- Can a company ever just hire people to take on only the job at hand or should one always look for raw talent?

Research and development.

- Is copying a tactic which, in the long run, results in the demise of a company. Would MF have survived if it had developed more of its own products?
- Can a company neglect in-house R&D and still survive?

Business expansion rate.

- How many new initiatives (innovations) such as entering new markets, copying products or product extensions, implementing management changes, is it practical to take on at one time? How big can the 'portfolio of change' be before it becomes counter-productive?

This White Paper explores the role of innovation in MF during the period 1960 to 1980 as well as examining the management practices and legacy of the company's founders.

Management of Innovation at Massey Ferguson Ltd. Circa 1960 to 1980.

During the period 1960 to 1980, the word innovation was not used in and around MF. It was a word which did not have the prominence (and overuse) which it has today. Proxies for innovation however lie in other definitions.

Research and development spending is probably the best indicator of an inventive/innovative company but other indicators such as the adoption of new business models, product introductions or product extensions, often suggest that change and innovation are alive and well. Even an emphasis on ‘continuous improvement’ can signal that a company takes innovation seriously.

The Short History of MF, presented later in this White Paper, clearly indicates that from its very inception in 1847, the founders acquired ideas from other companies. Either through acquisition or, more typically, through the purchase of patent rights or simply copying, and with clever re-engineering, MF offered these products to the Canadian and international (excluding the U.S.) market place. MF was, for most of its history, very much a follower and not a leader in the agricultural and construction equipment industry. MF’s business model was one of buying up companies which they believed represented a strategic advantage.



Our group has provided the following anecdotal information and assessment of MF’s innovative practices over the period 1960 to 1980. Anecdotal comments are augmented by reference to other research material. Comments have been organized into three main topics.

1. MF’s leadership.
2. MF’s approach to managing and organizing its day-to-day affairs.
3. MF’s approach to idea generation and realization.

Background information on each of the 25 Factors, noted by the F#, can be obtained by visiting the web site; <http://www.coporateinnovationonline.com>.

Leadership

At the same time as the desire to grow in terms of product volume and sales revenue, the focus of management’s attention was on the need to meet quarter-on-quarter financial results, even at the expense of shipping product which was not complete – i.e. parts were missing. The impact on the dealer, who took title to the product immediately it left the factory gate, was discounted in favor of the immediate accounting recognition of a ‘sale’. A short-term focus on profit was the order of the day.

MF senior management, while wanting to compete with Deere and even to exceed their size and reputation, consistently copied and re-engineered competitor’s products. At the same time this might have been the implicit strategy in order to avoid the risk usually associated with being a leader, a speculation MF could ill afford during its many periods of financial stress.

- At the end of each quarter the instructions from head office were to get the most equipment out the factory gate at which time it could be recorded as a sale even though the unit was still on its way to a dealer’s showroom – not yet sold.

1. MF’s leadership

- **Management (and Board level people) did not explicitly look for innovation (F#2), the subject was not high on the agenda for Board meetings, management meetings, conferences, etc.**
- **The emphasis by senior management was on achieving short-term profit at the expense and priority of long-term goals (F#1).**
- **Planning; business/strategic/planning/budgeting all emphasized cost cutting or rationing of resources rather than finding opportunities (F#4).**
- **Risk was not an agenda item in the planning process (F#9).**

- Argus, with only a 17% share interest in MF, emphasized the need for a regular dividend and consistent earnings performance. If these requirements were met, Argus seemed content.
- During the latter stages of the period 1960 to 1980 the emphasis shifted to cutting costs.
- Profit planning and control was focussed on budgeting and achieving certainty.
- Planning was frustrated by the view that any plan, no matter how well prepared, would not last more than two months.
- Most acquisitions were not seen as a means of getting at new innovative ideas so much as a means to get into a new business or new market.
- MF followed Deere into the construction equipment business.

'Forward planning had never been much practised at Massey'¹ and (MF) had achieved its growth through 'successful opportunism'. Rice, at the time he was the C.E.O., appointed a director of strategic planning, and further insisted that contact should be made with the firm's divisions world-wide and their advice sought'. This apparently was a dramatic change in MF's culture since the company had been run autocratically by both James Duncan and Albert Thornborough. Such moves to establish a corporate strategy were, by the 1980s, common practice for most companies, but not for MF. MF was a very late adapter of these accepted practices.

Innovation is unlikely to succeed where strategic planning is absent. Consultation with staff and line personnel, in order to bring in new ideas from the total organization, is one of the tenants of highly-innovative companies.

While the relationship between Black had been had been very good and had led to the appointment of Rice to the Presidency of MF in 1978, a leadership vacuum was created after Conrad Black sold Argus' shares to the MF Pension Fund in the early 1980s. Further, Rice was prohibited (by Black) from engaging in financial discussions with Canadian banks. Where Black and Rice had once seen ²eye to eye, this relationship disappeared. Argus continued its practice of refusing to let MF engage in a share issue because it would have diluted their holdings and as a consequence MF had to increase its debt to survive. The crucial ingredient to restructuring MF, which would have involved a thorough assessment of a survival plan and risk, was denied the person who was in charge of carrying out the survival plan.

Organization and management of day-to-day affairs

By today's standard of innovative management practices, the approach taken by management at MF was archaic. Almost every management practice, which might have supported a healthy climate in which innovation could take place, was missing. Times were different, but none-the-less the management practices employed were anathema to innovation.

- In the mid 1960's the company's North American headquarters was moved from Toronto to Des Moines, Iowa, ostensibly as a tactic to improve penetration of the U.S. mid-America market and compete with John Deere in this region. What also influenced the move was the immediate availability of a large factory complex recently deserted by an American tire manufacturer and available at a fire-sale price. Little consideration was shown for at least 200 to 300 hundred people, mostly Canadians resident in Toronto, who would be called upon to move south. Some went,

2. MF's approach to managing and organizing its day-to-day affairs

- **MF placed little emphasis on the management of people and their interactions. (F#6).**
- **Formal communication was the order of the day (F#10).**
- **The use of independent (groups with authority to make changes) work groups to accomplish projects and special tasks were seldom used (F#11).**
- **There was little of no consultation with others in the company except where it was absolutely required to get a project approved. Decision-making was often unilateral and driven from the top (F#12).**
- **The decision process (F#13) was highly formal and reflected a centralized approach to decision making (F#18).**
- **The organization was not action oriented but lost in the planning processes (F#15). Not much happened.**

¹ Massey at the Brink. P. 250.

² Massey at the Brink, p. 218.

many did not move and many who went came back soon. Word was out that the cost of the company's move would be minimized because many would not move. The message was easily that MF cared little about the impact of such a move on people.

- Staff mentoring was not practiced either at the operating unit level or at corporate headquarters.
- In contrast to some companies, hiring was focussed on getting the immediate job done with little regard for hiring talent for future company growth.
- Everyone was characterized as 'little robots' – not much tolerance for differences.
- Hierarchy was very important in MF. Albert Thornborough lived in a glass bubble – hearing only what he wanted to hear.
- Ideas coming up from below were not listened to. There was no encouragement of openness, except within the sales and marketing structure where good communications were evident.
- Task forces were not common. There was little use of independent work groups.
- There was little or no consultation within the organization and discussion went only as far as it had to in order to win the day.
- MF did not encourage personnel development at all.
- Training was not a big part of the corporate interest and no courses were offered.
- The United Auto Workers Union was active and a number of strikes occurred. None were crippling nor were unions deemed to negatively impact innovation. There was one strike at the Des Moines factory. There was no Massey employee association.

Encouragement of ideas and their commercialization

Approaches to the management of ideas within most corporations have evolved considerably over the last 5 decades. Our group's deliberations on whether MF had the management practices which contributed to encouraging ideas concluded that almost all practices were non-existent.

R&D activities were very limited. There was a research facility in Detroit and Perkins maintained a research lab as well. MF was not known to be oriented to R&D and rather was viewed as good at 'backward engineering' i.e. copying.

- Product development was not a priority.
- MF showed no proclivity toward hiring mavericks but rather pursued those with a background similar to their own.
- There was no special recognition of innovation such as bonuses or medals or promotion. There evidently was an incentive system consisting of watches and football tickets for some MF sales persons in N.A.
- Innovators were not attracted to the organization because of its reputation as a 'follower'.
- It was always understood that John Deere was the leading company and, for the most part, designs were based on following Deere's lead. Being second to Deere, at least in the area of product development, was seen to be an acceptable, and even a chosen strategy.
- The advanced engineering and design centre in Detroit, under the direction of Lee Elfes, took the heat for failures in the large tractor segment.

New products (ideas) were a matter of spasmodic priority in MF. 'One³ Massey official who viewed events from London commented that in the 1950s and 1960s, the company had talked seriously about building better tractors and combine harvesters' but by the 1970s 'all the talk was about company politics'. Two crucial ingredients in the farm machinery business, the development of new products and the relationships with dealers, were neglected.

3. MF's approach to idea generation and realization

- **There was little tolerance for mavericks (F#3).**
- **Failure normally ended up in the person responsible being fired (F#5).**
- **There was little tolerance for variances from a defined or undefined corporation norm (F#8).**
- **There were no reward mechanisms for innovators or innovations and, indeed, no one was identified as an innovator (F#14).**
- **There was no sense that resources would be made available should attractive ideas/projects be identified (F#19).**
- **R&D spending levels was inconsequential as compared to the competition (F#23).**

³ Massey at the Brink. Page 207.

MF's problems, aside from facing somewhat unpredictable business cycles and not facing up to the reality of the changing markets, was also that the⁴ 'the company had to pay dearly whenever it had fallen behind in the development of new products, and in the marketing of them'.

During the extensive negotiations with banks and governments, the Canadian government, as a condition of its possible loans or guarantees, stipulated that MF was to not only maintain jobs in Canada and but also establish a Canadian research and engineering base. Ironically, at this point in MF's development, employment in Canada was a mere 6,700 compared to Britain at 17,000 and the U.S. at 5,500. There has never been a research arm for MF, and to bring an idea forward at the time of financial negotiations was probably a century late.

Innovation comprises more than product development. Beyond this rather narrow definition of innovation, and realizing that the 'Japanese Way' of manufacturing through the adoption of 'continuous improvement' and 'quality circles' as well as other techniques, was yet to impact North American thinking about manufacturing, MF did not, in the opinion of our group, exhibit much innovation. Survival had become the priority and there was little time to think longer term.

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⁴ Massey at the Brink. P 269.

Appendix A

Methodology

The following sources of information were used to complete this White Paper.

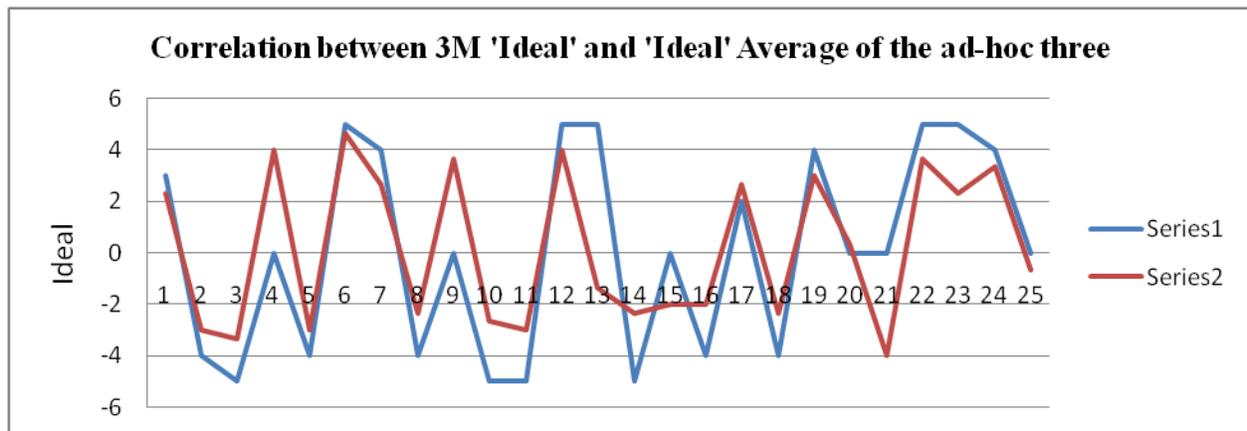
- Wikipedia; for information on Argus Corporation and Massey Ferguson Ltd.
- A research paper prepared by staff at the University of Western Ontario.
- Information from the web site of AGCO, the current holder of the brand name Massey Ferguson.
- A Conrad Black timeline – the Toronto Star.
- Friends of Ferguson Heritage Ltd.
- Massey at the Brink, published by Collins Toronto in 1981, author Peter Cooke.

In addition to the external sources of information, a group of three⁵ ex-employees of MF participated in a survey relating to innovation at MF during the period 1960 to 1980 and also engaged in a round-table discussion on the topic ‘the role of innovation in MF’.

The respondents were employed in different functional areas of MF during this time including legal affairs at the corporate level, plant operations at Verity Works and later in IT in Toronto, Detroit and Coventry, and personnel functions at King St. and Des Moines. Whether or not ‘very’ senior executives were of the same belief is a question but the consistency of viewpoint from the several vantage points of these three employees would, had they been known at the time, have made for an interesting discussion.

Each ex-employee registered their opinion in the 25-Factor survey available on the web site, <http://www.corporateinnovationonline.com>. Opinions on each of the 25-Factors; essentially 25 management practices which impact innovation, are the basis of the survey.

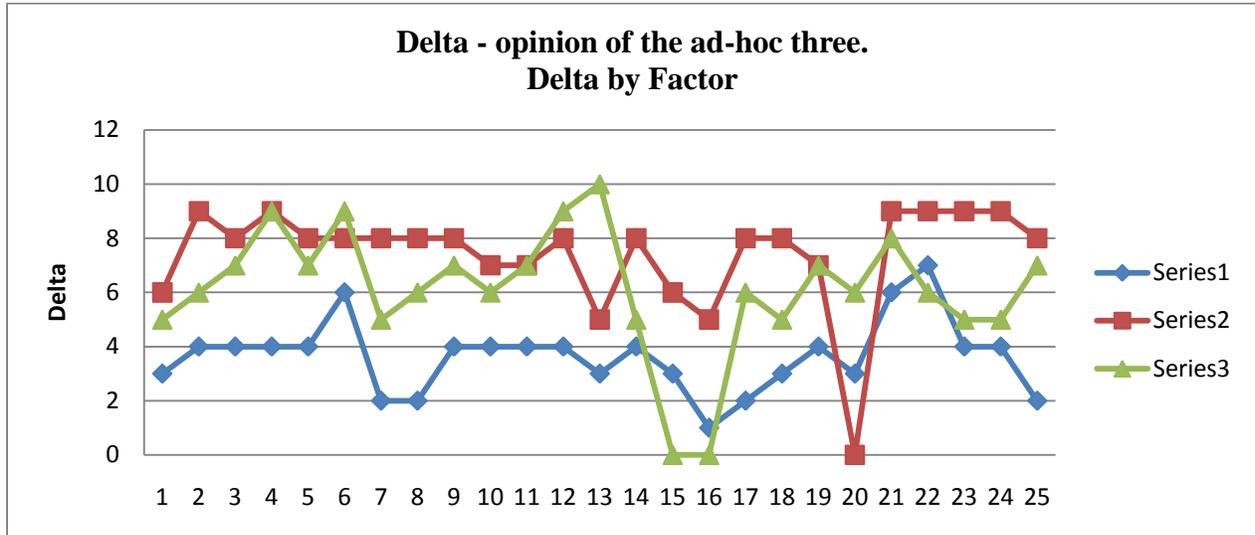
Each respondent was first asked for their opinion, for each of the 25 Factors, on what in their view was the ‘Ideal’ practice found in highly-innovative companies.



There is a strong correlation amongst the group and the profile of 3M as a proxy for ‘best practice’. This result confirms that the opinions of the group are neither too ‘Ideal’ nor too ‘Realistic’. This measurement also confirms that the opinions were essentially the same regarding the ‘Ideal’.

⁵ Paul White was a Project Manager in the IT group in Toronto and had worked earlier at the Verity Works. Derek Hayes was with the corporate secretaries group at corporate on two different occasions. Peter Ferguson worked in Personnel in the King St. plant and in Des Moines, Iowa. This employment occurred during the period 1960 to 1980.

The second step in the survey was to measure of the difference between the 'Ideal' and their 'Reality'; i.e. the 'Reality' of the situation at MF at the time of their employment. The 'Delta', shown in the graph below, is the difference between the respondent's 'Ideal' and their 'Reality'. The opinion of all three individuals is presented below.



The 'Delta' for MF is dramatically different when compared with other respondent inputs. An overall 'score' of 60 or above is normally indicative of a problem with the management practices which support innovation and this should be a cause for concern. The 'score' is the summation, for all 25 Factors of the difference between the respondents 'Ideal' and the respondents 'Reality'. In this case the overall scores for the ad hoc group were 91, 153 and 185, for an average of 153; a clear indicator of the lack of innovative management practices at MF during this time period; 1960 to 1980. Innovative management practices were essentially absent during this period.

Appendix B

A Short History of MF

Several books and many articles have been written on Massey Ferguson. The purpose of this short history is to focus on those management practices which impacted innovativeness at MF.

Early Years

Massey Ferguson dates back to 1847⁶, when Daniel Massey opened a workshop to build simple farm implements in Newcastle, Ontario.



Massey

In 1847, Daniel Massey who is described as⁷, a family man, businessman, inventor, tradesman, manager, entrepreneur and genius, bought a foundry in Newcastle, Ontario, and one year later established "The Newcastle Foundry and Machine Manufactory, C.W." (for Canada West). The workshop started by building simple farm implements. By 1870 the company was exporting farm machines to Europe and Daniel's son, Hart, incorporated it as The Massey Manufacturing Company with a capital of \$100,000. The head offices were moved to Toronto in 1880, and by 1883 the company's aggregate business had reached a million dollars.

Massey was ahead of its rivals in Canada because of⁸ 'their willingness to take American designs, manufacture them and create Canadian markets for them'. The smaller Canadian market was ignored by the Americans and it was easier to sell their designs. For example, patents for the hand-raking reaper, designed by the American, Walter Wood, made the work of two men turn into work for only one man, were acquired by Massey and similar actions placed the company in the forefront of farm mechanization. Typically, a successful Massey product would be discovered in the U.S. and then launched in Canada.

Two products, the raking-reaper and the self-dumping wheel rake were both invented by Americans. Massey acquired the Canadian rights to both products.

Acquiring product through the attainment of patent or licensing rights was augmented by the acquisition of smaller enterprises. In the fall of 1821, Massey bought out a struggling competitor, the Toronto Reaper and Mower Company, which had developed a new binder.

Massey set up the factory on King St., Toronto, in 1879.

Canada's western provinces were opening up and farming was a big part of this expansion. Mechanizing hand-operated equipment was being replaced by the adoption of more mechanization. Over the first half century, Massey's business boomed.

From 1847 to 1887, Massey was essentially a family business rooted in rural Ontario. Daniel Massey ran the company until 1884. Hart Massey took over following Daniel's death. He is remembered by his attempt to change the way workers were paid; shifting from a wage to piece work. Strikes ensued and the sense of loyalty between family and worker declined. Hart trusted only "other members of the family or close friends".

Harris

Meanwhile - also in Ontario - Alanson Harris established a foundry in Brantford, Ontario, to make and repair farm machinery. Harris picked up as many patents from Americans as had Massey. Both the Massey Company and the

⁶ Courtesy of the Agco Corporation web site.

⁷ Courtesy of the Agco Corporation web site.

⁸ Massey at the Brink, P 25.

Harris organization were competitors, Massey was number one in size and Harris was second but their growth was parallel. The open binder was a Harris initiative, a machine which could cut and bind grain of any length.

Both Massey and Harris became leading names in harvesting equipment and eventually merged in 1891 creating Massey-Harris (MH).

The subsequent acquisition of the Wisner Company in 1891 by MH further consolidated interest in the specialization of harvesting equipment. MH acquired the Verity Plough Company. Hart Massey soon emerged as fully in charge after the deaths of William Verity and Wareham Wisner which occurred within a short time of the acquisitions. As before, little attempt was made to sell into the U.S. as most of the designs originated there. Rather, a focus turned to European expansion.

In the late 1890s the era of the family operation – the Massey and Harris families – was coming to an end with the death of the founder, Hart Massey, his son Walter, and the only surviving brother, Chester. Even Directors of the company were no longer solely from the family. They came on to the Board as a consequence of acquisitions.

Tight, highly-centralized control was the norm at Massey from the beginning.

In 1903, the first outsider ever to run the company was put in place; Lyman Melvin-Jones. He was apparently autocratic and overbearing, insisting on making all the decisions, but he was experienced and had been successful earlier with Massey. He died in 1917.

Vincent Massey, who became President in 1921 and remained for four years, put forth a scheme to attract ‘young men of good liberal education into the company and grooming them for future management positions. Directors⁹ thought nothing of the idea. The period of family involvement ended fully with the departure of Vincent in 1927. The era of family management, with tight highly centralized family planning and control had come to an end.

Key management by outsiders

The subsequent period, of almost 4 decades, involved two world wars and a major depression and a succession of leaders and tumultuous changes in the global markets which Massey-Harris viewed as its market place. The war-time record of Massey-Harris proved helpful to the war effort and to building the reputation of the company. Attempts to penetrate the U.S. market, however, proved unsuccessful.

Massey-Harris became the largest company of its kind in the British Empire. During the four decades the company established factories in the U.S., France, Germany and Australia and the products became internationally known. Massey-Harris perfected the self-propelled combine in 1938, a machine which played an important role in meeting World War II food production needs.

Burtsell, the first outsider to be hired into the head of MF, was hired from the U.S. in the 1930s to reshape Massey-Harris and improve performance. He was a man without any experience in the farm machinery, but had a good reputation for cutting costs, Burtsell was known for his ruthlessness and he exercised this trait.

James Duncan, who, by contrast with Burtsell, had a long history of experience in agricultural equipment mainly in Europe, became a rising star within the organization during the time of Burtsell and rose to the #2 spot in the mid 1930s.

Burtsell ran afoul of Duncan when they had opposite views of the future, Burtsell arguing for retrenchment and Duncan in a more expansive mode. Burtsell lost to Duncan and soon resigned.

The idea for the self-propelled combine was ‘borrowed’ (in 1939) from a small Italian firm in Argentina that had produced a revolutionary reaper-thresher.

⁹ Massey at the Brink. P 53.

The Ferguson Matchup

Harry Ferguson was seen as a man of ideas. He built a business through imaginative insights into solving problems. Early discussions regarding merger or expansion of business interests were between Ferguson and Ford, not Massey-Harris. When these discussions broke down Ferguson looked to Massey-Harris as a logical partner. His view was that MH was weak in the design and manufacture of tractors, the area of strength for Ferguson.

A merger of the two firms took place in the mid 1953. Thus the Massey-Harris Company joined forces with a brilliant Irish engineer, who had revolutionized tractor design with his innovative three-point hitch. For the first time ever, tractor and implement could work as one - a concept that still applies today on virtually all agricultural tractors.

Ferguson soon bows out when the relationship with Duncan becomes uncivil.

The Ferguson three-point hitch. Today, 85 per cent of all tractors built use the Ferguson System, which makes it possible for small, lightweight tractor to do the work of a machine twice the size.

The Argus Corporation Link

Argus Corporation had been formed to act as a Canadian Holding company for a disparate group of companies, one of which was MF. Two of the Directors E.P. Taylor and Eric Phillips began to accumulate Massey Harris stock in 1943. Argus managed to ultimately end up with a controlling interest in Massey-Harris (Ferguson) with only 17% of the stock. Argus saw Massey-Harris as an investment and was not motivated by any particular feelings of loyalty or continuity. The only equations that appealed to Taylor and Phillips in their extended financial position¹⁰ were those of profit and loss.

Based largely on Duncan's war time work and his growing reputation Duncan invited Taylor and later Phillips to sit on the Board of Massey-Harris. However, even under the early days of Argus' influence Duncan remained in full control of Massey-Harris by remaining as Chairman of the Board, President and General Manager.

With the appointment of Argus directors and the restructuring of the Executive Committee decision-making became highly centralized and the dominance of one-person regimes such as, most recently, that of Duncan now reverted to an Argus dominated Executive Committee which was all in place by 1948. The fox had entered the lair and was to remain there until the early 1980's with overall bad results for the Company .

Duncan continued in the 1950's and '60's to nominally run the Company with a highly autocratic style making decisions without much input from others except from Eric Phillips who became de facto Chairman. Argus clearly controlled MF in most meanings of the word control. People filling the ranks at MF were not business men, nor professional managers, nor did they learn a lot about the world-wide nature of the business since they were not privy to Duncan's decision-making.

In the mid 1950's with profits falling Duncan came under pressure from Phillips to make changes. Albert Thornbrough, an American was appointed to the #2 position and, importantly was gaining status with the Board of Argus. Duncan left in 1956, ending a 46 year with the company. Thornborough was appointed to the top spot and another era began which was to last until 1980. While Phillips was alive, the close connection between Thornborough , who ultimately sat on the Argus Board and Phillips made for smooth relations between the operating company and the controlling ownership.

Highly centralized control continued but with the added distance of a holding company.

In the 1960s Argus controlled 12% of MF's shares but exercised its influence, in addition, through Board appointments. Argus controlled MF in most meanings of the word control. Personalities predominated. While Phillips was alive, the close connection between Albert Thornborough and Duncan made for smooth relations between the operating company and the controlling ownership.

¹⁰ Massey at the Brink, p111.

The New Era Begins

In the late 1950s, under Thornborough, steps were taken to bring more professional management to the company. Phillips, very much the architect of many of these changes, believed in decentralization and delegation, so contrary to Duncan's style.

A brief effort to decentralize and reduce hierarchy was initiated by Phillips – but it did not last.

The corporate name was shortened to Massey-Ferguson Ltd. in 1958.

MF purchased the Perkins Company in Peterborough, England, in 1959. With plants and licensee arrangements in several countries Perkins, at the time, was the world's leading producer of diesel engines. This purchase of Perkins was an important step in MF's change of policy from being an assembler to a manufacturer of engines. Up to this time MF did not make its own engines and purchased about 75 per cent of all its components.

Some efforts remained to further build the company's business but most of these were unsuccessful.

- In 1955, Massey purchased the Australian company Sunshine. Founded in 1915 by Hugh Victor McKay, they had tie-ups with Massey Harris for several years before MF outright bought them. The Sunshine name faded into history.
- In 1959, Massey bought 100% of **Landini**, based in **Italy**. Landini had built many models for Massey over the years, especially vineyard and crawler models.
- In 1966, Massey purchased 32% of the Spanish tractor and auto company Ebro, or Motor Iberica. Ebro had previously built Ford tractors under license, but now began building models for Massey, and Massey models under license. Massey later sold its interest to Nissan in the 1980s.
- Starting in 1969, Massey Ferguson started producing a line of snowmobiles by the name Ski Whiz. The snowmobile line sold until 1977, when sales declined.

Facing increasing international competition and an agricultural sector diminishing in importance, the firm began to struggle and soon began to decline financially.

Headquarters for the North American operations was transferred from Toronto to Des Moines, Iowa, in the 1960s.

Enter Conrad Black

In 1973, Massey purchased the German company Eicher, and many Massey-licensed Eicher tractors were built. They later sold their interest, and Dromson now owns the company.

1976 was a banner year for MF; sales and profit were up at record levels, as was the accumulation of debt. Victor Rice, the company's Comptroller, raised questions regarding the true state of MF finances and prospects but these observations fell lightly on an executive team bent on global expansion.

During the late 1970s, production was relocated to a new large facility in Brantford, Ontario.

In the late 1970s, Massey Ferguson came under the control of Conrad Black via the ownership by Argus Corporation. Black¹¹ assumed the Chairmanship of MF in 1977. Black begins to develop a relationship with Rice

¹¹ 1978: Astonishing the Canadian business establishment, Black, at the tender age of 33, in **May acquires control of Argus Corp. Ltd.**, a storied conglomerate founded in 1945 by tycoon E.P. Taylor and others, including John "Bud" McDougald and Black's father, George Black. By 1978, Argus is one of Canada's largest collections of familiar corporate names, including global farm-machinery giant Massey-Ferguson Ltd.,

and in the summer of 1978 the two would develop a close working relationship. Rice was appointed President and Chief Operating Officer in the fall of 1978. Albert Thornborough remained as Deputy Chairman and Chief Executive Officer – for the time being.

In 1980 Black quit as chairman of a struggling Massey-Ferguson, donating Argus's M-F shares to its employee union. Over the next few years, Argus shed most of its assets, reinvesting the proceeds in newspapers.

Problems of potentially overwhelming significance started to appear in 1978.

Asset sales and restructuring – 1980 and on to oblivion

Victor Rice's assumption of power – limited early by the restrictions of Argus' influence – came at a time, in 1978 when the company faced numerous problems in the market place, a growing financial encumbrance, and benign neglect by its principal shareholder. By all accounts Rice's moves to shore up MF's prospects were well intended but probably came too late.

In 1981, Black arranged a government bail-out for the collapsing company and sold it to a group of investors who reorganized it as Varsity Corporation. In the mid 1980s, Varsity spun off several money-losing divisions into an entity called Massey Combines. Massey Combines became insolvent soon after, and its assets were re-acquired by Massey Ferguson.

Massey sold 66% of Lindini, the Italian manufacturer of vineyard and crawler models, to ARGO in 1989, some to Iseki later on, and the final portion was sold by AGCO in 2000.

In 1992, a management buyout of MF industrial created the company Fermec which finally ceased trading in 2001 when it was swallowed up by Terex. This encompassed all construction equipment from Massey. It was purchased by J.I. Case in 1997.

In 1994, the farm equipment divisions of Varsity were sold to the American AGCO Corporation who continue to use Massey-Ferguson brand as a product line.

In 1995, what was left of Massey Ferguson was purchased by the US-based AGCO Corporation.

In August 1996, Varsity merged with Lucas Automotive to become LucasVarsity. After a series of mergers and takeovers, the remains of LucasVarsity were taken over by TRW, a U.S. company.

Ironically, since 1962, Massey Ferguson has been the world's leading tractor brand. This is most likely due to the fact that Massey began to sell globally earlier than the rest of its competitors. Currently, there are more Massey-branded tractors than any other, worldwide.

Appendix C

John Deere

A Brief Profile

John Deere, by contrast to Massey, seems to have started off with a different value system when it came to innovation or, invention, as was the term in use at the time.

By all accounts, and to this day, the company's guiding principles, integrity, quality, commitment and innovation can be traced back to the founders but the legacy of the founders continues to this day in the remarks of the recent C.E.O. Robert W. Lane.

- 'Emphasis is placed on rewarding 'great performance with outstanding rewards'. The rewards practice is set in the context of a 'commitment to innovation' by a 'commitment to aligned talent' in an effort to encourage high-performance talent to work together'.
- 'To give you an idea of how serious we are about innovation at John Deere, each senior officer reporting to me (Robert W. Lane) is required to have a breakthrough innovation-related performance management objective, and compensation at year-end will be impacted based on whether the goal is met'.
- 'R&D has consistently run in the range of 4 to 5 percent of new sales, generally high for our industry... a spend rate of nearly \$2 million a day' according to Robert W. Lane.

John Deere (February 7, 1804 – May 17, 1886) was an American **blacksmith** and manufacturer who founded **Deere & Company**— one of the largest agricultural and construction equipment manufacturers in the world. Born in **Rutland, Vermont**, Deere moved to Illinois and invented the first commercially successful **steel plow** in 1837 - built on the idea of being the first to produce a steel plow (as opposed to being made from cast iron).

Deere, has for decades invested in R&D. In most recent years, Deere maintains its R&D expenditures at approximately 5% of sales.

Robert W. Lane in his address talks about how Deere is 'Driving Growth Through Innovation'. Emphasis is placed on 'investing in R&D over the long run, in good times and bad', and one of the pillars of Deere's program is entitled 'a sustained investment'. One of the Phases of the Accelerated Innovation Process, noted above, is called 'opportunity identification'; an ongoing process of working with Deere's strategic partners to come up with both 'sustaining' and 'breakthrough' innovation.

Appendix D

List of 25 Factors¹²

Twenty-five Factors make up the survey of management practices which was used to measure the opinions of the ad hoc group of three. Listed below are all 25 Factors and a statement summarizing the typical best practices of highly-innovative organizations. Respondents opinions are shown.

| F# | Factor description | Management practices of highly-innovative companies |
|----|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Emphasis on short-term versus long-term profits. | Management is prepared to wait a reasonable time for a payout from innovation, but not too long. Management is not looking for short-term profits. |
| 2 | Extent to which management explicitly looks for innovation | Management explicitly and aggressively looks for innovation. |
| 3 | Tolerance of mavericks. | Management really does have a high tolerance for mavericks in the organization. |
| 4 | Planning emphasizes identifying opportunities versus rationing of resources. | Management, when planning, put a strong emphasis on looking for opportunities and is less focused on rationing resources. |
| 5 | Tolerance for failure. | Management has a reasonably high tolerance for failure. |
| 6 | Emphasis on management of people and their interactions. | Leaders, by way of their management practices, put a great deal of emphasis on the management of people and their interactions. |
| 7 | Use of career ladders and recognition of innovators. | It is important to place some emphasis on recognizing innovators, but overall opinion is very mixed. |
| 8 | Tolerance for variance from the corporate norm. | Opinions are on both sides of this Factor and not very strong either way. Perhaps not an important Factor! |
| 9 | Tolerance for risk (in the planning process). | Respondents to the Survey are divided on their opinion on this Factor. For most innovative companies, however, risk is seen to be an important part of the innovative process. |
| 10 | Degree of formal communication within the organization. | The emphasis in an innovative culture is on a minimum of formal communication and an encouragement of openness through less formality. |
| 11 | Use of independent work groups. | This action is viewed as an important management practice in a culture which supports innovativeness. |
| 12 | Degree to which management decisions are made with input from the rest of the organization. | Input from the whole corporation is a value associated with innovative companies; less autocracy and more participation. |
| 13 | Formality of the decision process. | More informal and less formal is the view of respondents to the survey. |
| 14 | Availability of reward mechanisms for innovation. | Respondents advocate the use of specific rewards for innovation. |
| 15 | Planning orientation versus action orientation. | Results from those who responded to the Survey have a divided opinion. |
| 16 | Attitudes towards merger, acquisition, joint ventures, and divestiture. | It did not seem to matter much whether there was an open or closed attitude to major structural changes at the corporate level. |
| 17 | Management expectations regarding loyalty to the company versus personal development. | Respondents to the Survey have a divided opinion – with a slight view that there should be some encouragement for personnel working towards personal development. |
| 18 | Decentralization versus centralized hierarchy. | Respondents to the Survey indicate a definite desire for a decentralized organization with little hierarchy. |
| 19 | Availability of resources (budget, time, etc.) for new ventures. | The indication, or past evidence, of resources being available for innovation is a definite incentive to be innovative. |
| 20 | Staff versus line involvement in the decision process. | Opinion is divided. Some argue for lots of staff involvement; others are opposed. |
| 21 | Ability to retain innovators. | In the ideal culture for innovation, innovators should stay with the corporation but respondents' reality seems to be that innovators leave. |
| 22 | Extent to which company has an innovative tradition. | It is quite important to be seen to have a tradition of innovation; hard to get, perhaps easy to lose. |
| 23 | R&D budget levels versus the competition. | Should be better than the competition but not over the top either. |
| 24 | Perception of innovation as increasing or decreasing. | Somewhat similar to responses to Factor #22; i.e. perceptions in themselves act to encourage a culture for innovation. |
| 25 | Degree to which employee organizations encourage innovation. | Not a hugely important Factor. |

¹² For a complete description of each Factor, visit <http://www.corporateinnovationonline.com>