From High Hopes to Disillusionment:
The Evolution of Worker Attitudes at Mitsubishi Motors

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ABSTRACT

In the spring of 1989, Chrysler and Mitsubishi Motors entered a joint venture to build automobiles in Bloomington-Normal, Illinois. Production and maintenance workers at the joint venture Diamond Star plant approached their jobs with great anticipation. Not only did these jobs offer significantly higher wages than most had made previously, they came with promises of employee empowerment. Now eight years after "lean production" and "employee teams" were introduced, this paper revisits the initial an expectation of workers and through an employee survey assesses how employee attitudes have changed. In brief, we found that worker satisfaction, support for new productive systems and trust in management had fallen dramatically from the initial study. Our findings add to the growing body of work in the automotive industry that strongly contradicts the thesis that lean productive systems necessarily lead to worker satisfaction and empowerment.

Introduction

In their 1990 book, *The Machine that Changed the World*, James P. Womack, Daniel T. Jones and Daniel Roos stated, "Our conclusion is simple: Lean production is a superior way for humans to make things…It provides more challenging and fulfilling work for employees at every level, from the factory to headquarters. It follows that the whole world should adopt lean production, and as quickly as possible (225)." Since the book's publication, many corporate managers have taken the book's message as their own and now speak of creating lean firms in which employees are empowered. An

Automotive News review reported the study as one "of great understanding, and of hope. It shows how to create an industrial world in which workers share the challenges and satisfactions of the business" (1991: 12).

Advocates of lean production systems seemed to have staked a paradigm-shifting claim that there is only one best way to build automobiles. The scientific-management days of Taylorism (ex. hierarchical chain of command, detailed division of labor, large production runs) and the command and control philosophy of Henry Ford (ex. tight supervision of workers, power and autonomy of foremen) have been eclipsed and replaced with a work process that promises flush bottom lines and high employee satisfaction. However, in pronouncing on the effectiveness and potentiality of lean production systems the predominant concerns of business-oriented researchers have been on performance measures (ex. labor productivity, inventory turns, first-time quality) and on executive perceptions of lean practices.

While recognizing the complexities involved in assessing the consequences of an industry experiencing rapid transformation, it is the argument of this work and a growing body of scholarship that examining performance measures without investigating the effects of lean practices on quality of worklife issues seriously distorts such studies.[1] Furthermore, critiques of lean production systems absent a thorough worker-centered assessment of the nature of the work

[1]. The International Research Network on Autowork (IRNNA) in the Americas is a collaborative effort of labor researchers in Mexico, the United States and Canada. The group was formed at a 1997 Conference in Puebla, Mexico to examine quality of work life issues in the auto industry. The focus of this work closely approximates the mission statement that IRNNA has adopted. The group has also published a book, established an ambitious research agenda and planned conferences for 1999 and 2000.

day would seem to risk unintended consequences for corporate policy making.

This research stream takes as a first principle that a productive workplace should also be humane, safe, enriching and offer workers greater control over their working lives. It is abundantly clear, however, that worker satisfaction is not required for pushing out production or for achieving Wall Street accolades. But if the "whole world should adopt lean production" as a new model for making things than it seems right to at least consider the resulting trade-off in quality of worklife that workers are expected to assume. Alternative manufacturing systems should be judged against a host of quality of worklife issues. In summary form, the focus of this research and our paper is not on profit or productivity, but on such worklife issues as workload, injury rates, job security, skills attainment, job enrichment, and the degree of genuine worker discretion in controlling the work process. As a marquee feature in lean models worker empowerment is a critical component in measuring worker satisfaction. In addition, it is our contention that to properly assess workers' quality of worklife requires treating workers as a valid source of information. More succinctly, it is the level of worker satisfaction with lean production as measured by worker attitudinal surveys and interviews that provides the sum and substance of this work.

In this paper, trends in employee satisfaction and attitudes toward work organization at Mitsubishi Motors Manufacturing of America (MMMA) are examined in order to draw a broader understanding of the relationship between lean production and employee satisfaction. It is not the intention of this work - nor was it possible due to MMMA policy - to identify all of the factors that may have contributed to the way the

company implemented various lean practices. While there is growing evidence of certain common denominators in lean facilities reporting both high worker satisfaction and very low satisfaction, we offer no certain prescription for fixing a "failing" lean plant. Such a task would require a different research project and a good degree of management cooperation (missing here). The research on Mitsubishi Motors is properly understood, and should be analyzed, as another (we also believe special) contribution to the list of actual lean production case studies. In adding a wholly owned foreign automotive assembly transplant to the body of lean studies, this work furthers the goal of measuring lean practices against quality of worklife issues.

Mitsubishi Motors provides an excellent opportunity for assessing the evolution of lean production systems because a study done just after the opening of the plant provides baseline data on worker satisfaction and company operations. The findings strongly suggest that employee satisfaction with nearly every element of lean production has markedly declined, workers' trust in management has nearly evaporated and workers no longer view the social organization of work as empowering. Combining these elements provides a profile of the impact of lean production on workers lives that is significantly different from what its advocates have predicted and furthers a general understanding of how lean production and employee satisfaction are related.

This paper is divided into six sections. The first presents a discussion of what constitutes a menu of lean production practices and items. This is followed by a review of the case study literature on lean production systems in the automobile industry. This discussion provides a starting point from which to analyze the impact of the organization of work at Mitsubishi on the work lives of

the bargaining unit employees. Section three offers a summary of the research methodology used in this case study of Mitsubishi Motors. Section four briefly presents an overview of the history and operations of Mitsubishi Motors. A description then follows of the social organization of the Bloomington-Normal plant. In the next section, research results are presented and conclusion follows tying the current research back to earlier findings that examine the relationship between lean production and worker satisfaction.

Lean Production

Any discussion of lean production becomes more complex because of a lack of a consistent definition for the term. Womack, Jones and Roos identify the key attributes of lean production that lead to greater employee empowerment and satisfaction as cross training, multi-skilling, and job rotation. Others have noted the importance of self-managing work teams, flexible work assignments, and diffused supervision (Naidler and Gerstein 1992). Still others with a decidedly cautionary attitude about lean systems would include a de-emphasis of seniority and job classifications, increased worker responsibility (and usually other union negotiated work protections), production speed-ups and an ideology that stresses a manipulative cooperation between labor and management (Parker and Slaughter 1988).

While different sorts of definitions capture something critical about lean systems, most do not adequately conceptualizes the work process as a relationship between two equally important dimensions. The conceptual approach informing this work views lean production as a menu of attributes that includes both the

technical and social organization of work (Babson 1997). To be sure, the presence or absence of any single technological or social characteristic is insufficient to characterize a system as lean, but some combination of these is required. The technical organization of production refers to items like standardized work, visual controls, planned maintenance and just-in-time inventories. Social organization typically includes a focus on extensive screening and training processes for workers, symbols of egalitarianism such as common uniforms and shared parking, continuous improvement methods, work teams, employee discretionary authority to control the work, and "quality in-station" (i.e. each worker is responsible for assuring the quality of the product at each step). It is the social organization of work in lean production that typically receives the greater focus in discussing its outcome for worker satisfaction and will likewise in the discussion that follows.

Moreover, while a lean environment may or may not have a variety of these characteristics, the particular form each attribute takes may vary significantly. For example, teams can be either worker centered or supervisor centered. Teams may exist where management directs nearly all of the activities, or they may exist where decisions are democratically made and carried out by the workers. Naturally, in practice most teams would fall along a continuum between these two extremes. Similarly, "quality in station" programs may or may not give an employee the power to stop the line.

The distinctions become important in the current research because they point to the variety of outcomes possible in lean production environments.

Babson's model challenges the earlier research by Womack, Jones and Roos that assumes the contiguous nature of the technical and social organizations of work in lean production. According to this model, the technical organization of work associated with lean production does not necessarily lead to a particular democratic social organization of production. Lean production is not synonymous with either employee empowerment or exploitation.

Within the debate over lean production, employee empowerment is an equally nebulous and contested concept. While some definitions focus on increased responsibility (i.e., monitoring quality, maintaining machinery, and troubleshooting problems), others focus on the workers ability to use or withhold enterprise resources either through formal or informal channels. Research that considers the "empowered workplace" identifies management delegation of responsibility and authority to workers as a "shift in power." However this definition is not sufficiently explanatory. Questions about power remain. For example, are decisions to delegate left to the discretion of management? Can unilateral changes be made as circumstance change? As a working definition then for the current research, power is defined as "not only…responsibility and formal authority, but also the capacity to mobilize a group's internal resources (member loyalty, organization, symbols of unity, leadership skill) for actions that defend or extend the group's claim to enterprise resources" (Babson 1995: 5).

Not withstanding the diversity of definitions, the research approach of this work assumes that lean production and employee satisfaction will be products of collaborative and conflictual working arrangements. It is further accepted that workers and managers will coexist in an environment where goals are sometimes compatible and sometimes

antagonistic.

Brave New World

Following *The Machine That Changed Th e World,* lean production proponents have claimed a superior work process that unlike Fordist work systems, actually encourage s autoworkers to utilize their cognitive skills (MacDuffie 1992). In the process of enlarging job tasks and appropriating a good deal of control over how the work will get done, workers will experience a higher level of job satisfaction. Bolstered by the extensive leading edge forms of worker participation developed at GM's Saturn plant (Rubenstein, Bennett and Kochan 1993), proponents of lean production have heralded the birth of a new democratic production process. But contrary to theoretical claims, recent case studies in the automobile industry reveal a less utopian shopflor reality.

Empirical analysis done at Canadian-American Manufacturing Inc. (CAMI), New United Motor Manufacturing Inc. (NUMMI), Mazda, Ford Motor's Wayne, Michigan stamping plant and the General Motors assembly operation in Linden, New Jersey challenge the simple conclusion that "lean production" automatically results in worker empowerment and ultimately employee satisfaction (Rinehart, Huxley and Robertson 1995; Babson 1993, 1995; Adler 1995; Kaminski 1996; Lewchuck and Robertson 1996,1997; Milkman 1997).

In these studies, lean production does not simply lead to either worker empowerment or exploitation. At NUMMI for example, the plant boasts world-class productivity and quality, while maintaining high worker moral and commitment. The Toyota-General Motors joint venture has achieved

"spectacular success" and become a "major show case" for employee involvement programs (Milkman 1991). Paul Adler (1995) attributes this outcome to a combination of lean production techniques and a strong union presence, which he calls "democratic Taylorism." Key to this outcome, he concludes, is management's willingness to cede some of its power to the workers and to offer job security in exchange for the workers assuming the risks associated with radical job restructuring.

It should be noted, however, that while power sharing appears to be real, NUMMI enjoyed some "unique start-up advantages." After closing in 1982 the company reconfigured in 1984 with a new management team and a heavily screened and selected workforce that was obviously very grateful to be back at work. As Brown and Reich (1989) have pointed out, formal labor-management cooperative relations were likely enhanced as a result of the two-year shutdown.

The Ford Wayne stamping plant also provides an example of a lean production facility in which increases in worker satisfaction seemed to hinge on the union's ability to negotiate strong contract language and to maintain a significant role within the facility. Michelle Kaminski (1996) reports that a Modern Operating Agreement was not only jointly signed, but also developed between Ford and UAW Local 900. The author notes that the union used the bargaining process to incorporate worker ideas into a new contract implementing the partnership. The Wayne stamping experience also reveals the importance of assuring that a comprehensive, continuous role for the union is maintained from the early conceptual program design period to yearly performance evaluations.

Research at CAMI, however, revealed a lean production environment in which workers have little self-management and in which team meetings are little more than informational meetings at the beginning of the work shift. Jobs are highly standardized and tightly timed so workers have little discretion over how their work is done. The research at CAMI was done over a two-year time period during which worker attitudes toward teamwork shifted significantly. Just after the plant had begun operations, nearly 63% or the workers interviewed had reported that working in a team made them feel more a part of the company; two years later that number had dropped to 23% (Rinehart, Huxley, and Robertson, 1995).

Research at Mazda further challenges the emancipate power of lean production. According to Steve Babson (1993), independent unions are critical to the evolution of a lean production system from a "supervisor-centered" to a "worker-centered" team approach. At Mazda workers used the collective bargaining agreement negotiated in 1991 to accomplish the changes necessary to expand a notion of "team democracy." Babson's work further highlights the finding that the structure of teamwork is never stagnant and can serve to either empower or exploit workers.

Technological innovations, job redesign and employee participation were characteristic of the $300 million investment made by GM at its previously luxury car assembly plant in Linden, New Jersey. Shutdown for over a year, the plant reopened in 1986 with the promise of improved efficiency and heightened worker satisfaction. Instead of assembling Cadillac's in the traditional Tayloristic

fashion, the workers would now build-in-station Corsicas and Berettas. But despite strong worker cooperation with the formation of "employee involvement groups," extensive in-house training, and the cultivation of jointness within a very short period worker attitudes about the promised lean production improvements had deteriorated into a running joke about the "new Linden." Taking advantage of unprecedented access to GM-Linden workers, Ruth Milkman's (1997) study "casts doubt on the common presumption that productivity improvements are necessarily associated" with non-adversarial labor-management relations. Milkman reminds the reader that while workers were blaming management for undermining the participation process, in 1990 the Linden facility earned the title "GM best."

Perhaps most devastating to the claims of those who argue that lean production empowers workers is the research of Lewchuk and Robertson (1996; 1997). In a study of more than 1,670 Canadian automobile workers across lean and traditional production facilities, they found "no support for the hypothesis that lean production empowered workers or improved the quality of working life" (42). If anything, the two lean plants scored significantly worse on many of the indicators of good working conditions, including empowerment.

In brief, it should be noted here that case studies based on production workers own evaluations of lean production systems in the auto industry have revealed one common denominator relevant to the internal environment. As any student of Fordism would intuitively predict, without some reasonable degree of contractually guaranteed union influence management will likely exert unilateral

control over the operation of lean production in ways that contradict the worker empowerment goals of the systems (Babson 1993; 1995). The case studies to date reveal that strong collective bargaining language (except for safety items, missing at Mitsubishi) which codifies the procedures and obligations of joint-decision making appear to contribute to a successful weaning from Fordist approaches.

The Saturn Project may be the best example of embedding jointness into a formal structure. Arguably the auto industry's showcase post-Fordist model the General Motors-United Auto Workers (UAW) agreement includes unprecedented contractual commitment to worker-management cooperation. However, while contract language in unionized lean operations appears to be important to improving the quality of worklife the causal relationship is not evident. Without a more detailed analysis and comparison of lean facilities with labor agreements it is impossible to know how exactly language has addressed the areas identified as key to worker satisfaction.

Of course this tasks is made more problematic by the existence of nonunion foreign automotive transplants (i.e. Honda, Toyota, Nissan, and Subaru-Isuzu). While a formidable insider account of Toyota's Georgetown, Kentucky plant (Graham 1993) revealed that workers have many of the same problems with lean production as those workers experienced at MMMA, until access to the nonunion shops is gained competing theories will abound about why collective bargaining protections have not been adopted. Theories were no doubt encouraged in 1985 when the UAW aborted an organizing drive at Honda Motors

and again in 1989 when Nissan assembly plant workers in Smyrna, Tennessee rejected union representation. The organizing record is roughly similar north of the border between the East Asian transplants (i.e., Honda, Toyota and Hyundai) and the Canadian Automobile Workers (Yanarella and Green 1994). The authors would only note here that there is a rich field of union avoidance literature available to provide intense debate on the reasons why workers have not chosen formal representation.

What emerges from this research is a more complex story in which worker perceptions of lean production and its impact on their work conditions differ by facility and over time. The challenge is to better understand the dynamic interaction between lean production, employee empowerment and employee satisfaction and the conditions under which a particular outcome occurs.

Research Methodology

As stated earlier the current research is primarily concerned with the evolution of employee attitudes over time at Mitsubishi Motors. Earlier studies at CAMI and NUMMI have indicated that employee attitudes about lean production change as workers expectations are not fulfilled or as the company changes its policies. While these previous studies have focused on change, they have considered relatively short time horizons. For example, until the current research, the two-year CAMI study was the longest. However, the present work considers changes that have occurred after eight years of production. The current analysis is made possible by the existence of a survey that was completed by a sample of workers at Mitsubishi Motors shortly after the facility opened in 1989. Earlier survey data then provides a base from which to measure changes

in employee attitudes toward their work at Mitsubishi Motors.

The company was analyzed in two phases. Phase one consisted of the authors visiting the plant, researching the history of the facility and participating in exploratory interviews with both union leadership and rank and file members. Interviews were conducted with the aim of assessing the key issues relevant to workers' evolving attitudes about lean production at the Mitsubishi facility. These interviews focused on the technical organization of work (ex. job rotation and cross training) and the social organization of production (ex. involvement in quality circle programs and kaizen projects). The results of 20 interviews demonstrated that issues of power sharing and trust were paramount to worker dissatisfactions with Mitsubishi's version of lean production.

Equipped now with a better understanding of company practices and dominant worker concerns a 64-question survey was constructed. This survey was designed to provide both time series data and cross-sectional information in order to look at both changes that have occurred at Mitsubishi Motors over time and to be able to compare Mitsubishi Motors with other auto producers in the United States and Canada. The survey was essentially divided into three parts. The first part of the survey replicated the 1989 research conducted at the then Diamond Star plant. These questions used a simple five-point Likert scale ("Very Negative to "Very Positive"). This allowed us to compare employee attitudes and satisfaction with the organization of work during the two time periods.

The second and third sections contained questions intended to explain trends in employee attitudes toward work organization. Workers were asked to answer a series of

thirty-five questions focused on work pace, changes in their job, skills and training and treatment by management. The survey also contained two open-ended questions. One asked the respondent to comment on their experience working on a quality circle project. The other asked for general comments about "work life and lean production." Some of these questions where based on findings from previous research while other resulted from the interview process. Finally, due to the attention that certain elements like quality circles, kaizen and trust received during the interviews, they were given special survey attention.

In mid-September of 1997, the union local mailed a four-page survey to the homes of 3,000 bargaining unit members. While there were 3,214 union members employed at Mitsubishi (*UNION Spirit* 1998), surveys were only sent out to those with a valid address. From this single mailing a 1090 usable responses (another 50 surveys were returned unopened) were received. Responses were accepted through the end of November. This represented a very robust 36% response rate.

The distribution of useable surveys reflected the total population of the plant in terms of work group, location (5.5% stamping, 22.9% body shop, 38.4% paint, 55.9% trim and final assembly), seniority and shift work. Distinctions based on employment data will be discussed at greater length below, but it is sufficient to note here that somewhat surprisingly the shift schedule was not a factor in explaining employee attitudes. Workers do not change shifts at Mitsubishi Motors and studies have noted that night-shift work may be inherently less appealing. For example, the National Institute for Occupational Safety and Health has identified the negative effects of "permanent night shifts" and recommended eliminating such schedules (*Plain Language About Shift*

Work 1998). The findings, however, revealed no statistical differences between day and night shift employee attitudes.

While differences in shift assignment did not reflect any statistical significance, plant seniority and work location were more sensitive variables. Results indicated that workers with greater seniority (7-9 years) harbored more negative views toward the company and work process, than their less senior peers (1-3 and 4-5 years). In addition, certain on-line job sights (ex. trim and final assembly) revealed higher negative views than the average of all workers. Where significant statistical differences occurred on the bases of seniority and work area the comparisons were reported.

It is also important to note that the median worker had eight years seniority indicating that at least half the respondents had worked in the plant when the first survey was done. While it is difficult to know with certainty what percentage of the 1997 survey participants were represented in the 1989 base-line study, it is very likely that the survey reflects a direct comparison of changing employee attitudes over time.

One final point. United Automobile, Aerospace and Agricultural Workers of America (UAW) Local 2488 facilitated the research and interviews, as well as the data collection process. However, Mitsubishi Motors management declined repeated requests to have management and executive personnel involved in this project. While this certainly limits the project's ability to address some questions, because the focus of the current paper is on employee satisfaction and not employer motives the scope of the data is appropriate.

Background and Operations of Mitsubishi Motors

Originally called Diamond Star, Mitsubishi Motors was formed as a joint

venture between Chrysler and Mitsubishi Motors. This greenfield plant was located in Bloomington/Normal, Illinois after an intensive competition among several Midwestern states. In return for locating the plant in the community, Mitsubishi Motors received a variety of tax and community support incentives (Chapman, Elhance and Wenum 1995). The plant, which covers 2 million square feet, is extremely compact and highly automated.

The more than 3000 production workers currently produce approximately 900 cars per day in six different styles, including the Mitsubishi Galant, Spyder and Eclipse; the Dodge Avenger; the Chrysler Sebring and the Eagle Talon. The facility has its own stamping operation, but engine, seat and transmission production happen off site. The facility uses both Mitsubishi and Chrysler engines, and because of the variety of models produced, each car is tagged on the assembly line. These machine-readable tags also include information on model, color, and accessories.

The company operates on a "just-in-time" basis. Most suppliers deliver once a day, but as the number of local suppliers continues to increase, deliveries are becoming more frequent. Much of the company's inventory is stored at GATX located next door to the Mitsubishi plant. Other inventory is stored in trucks in the parking lot of Mitsubishi. Tire and seat deliveries occur most often and arrive sequenced by vehicle specifications.

There are nearly 700 robots in the facility. While they operate though out the plant, they are concentrated in the body shop and painting area. Robots have not been successful in all areas of the facility. Robots with locators were

originally used to install seats and dashboards, but proved too slow in completing the assigned tasks and have been replaced by humans. Mitsubishi Motors has solely owned this facility since the company bought Chryslers' 50% stake in 1991. This sale reportedly resulted from Chrysler's desire to boost short term profits (Chandler and Stertz 1991). As noted above, Chrysler does continue to contract with Mitsubishi to have several of its products produced in the Bloomington-Normal facility.

Mitsubishi has not been without its share of national attention. In the spring of 1996 the Equal Employment Opportunity Commission (EEOC) leveled sexual harassment charges against Mitsubishi Motors. Those charges have overshadowed other significant events at Mitsubishi Motors including its first reported profit in the spring of 1997. As a result of those charges, the company employed former Secretary of Labor Lynn Martin to review work conditions at the plant. In her report, she referred to the facility as a "company with Japanese parents and an American up-bringing…" who "…as it moves from adolescence to maturity … has been buffeted by currents internal and external" (1997: 1).

Now it should be clear that the research did not in any way address the harassment issue. Several precautions were taken in both the exploratory interviews and in designing the survey questions to minimize any worker's belief that the research was about anything other than lean production. It is noteworthy, however, that survey responses based on job locations did not reveal any "female" effect. In other words, there was no appreciable statistical difference between job sites where women are concentrated and where they are a noticeable

minority. However, while the research never intended to touch upon the sexual harassment lawsuit, the culture of work at Mitsubishi and the evolution of work structures in the facility are certainly contiguous and represent in Martin's own words the growing pains faced at the facility.

The Social Organization of Production at Mitsubishi Motors

The UAW represents the production and maintenance employees at Mitsubishi Motors. Like other joint ventures, the company did not oppose union representation and the union was card certified in late 1988. The first collective bargaining agreement, signed in September of the following year, codified the plant's group-based production system and established a structure of shop floor representation.

As in Big Three auto plants, union members at Mitsubishi elect full-time representatives to district and plant-wide committees that monitor compliance with the contract and represent members in the grievance procedure. Unlike Big Three plants, however, the first collective bargaining agreement also recognized an additional level of union representatives called "line coordinators." Each coordinator was responsible for about 45 members in their immediate work area. Though they are to serve as the first recourse for members seeking help, coordinators work at regular plant jobs and cannot leave their workstations.

Any work coordinators do to represent the needs of those in their area must be done during breaks, lunchtime and before, or after work. If the problem requires special attention, coordinators pass it along to the full-time union representatives. These individuals - paid by the company - try to settle disputes

informally if possible and by filing grievances when appropriate. In practice, the full time union representatives handle most of the issues that occur on the floor because of the limited time in which the "line coordinators" can function. The local is currently searching for ways to solve this problem. Only about twenty grievances are filed per month.

The Japanese presence at Mitsubishi is manifested in the symbols and the esthetics of the facility. Employee life at Mitsubishi is bound by the rhetoric of the social organization of work teams, quality in station, continuous improvement and enterprise solidarity. The work units (made up of approximately 15-20 workers) are called "groups" with line management done by "group leaders." As is typical in Japanese facilities, workers and managers wear the same uniform and eat in the same cafeteria. Also typical of Japanese style management, terms like "kaizen" (continuous improvement) are regularly used and workers are referred to as "associates." Work units are made up of approximately 15-20 workers and are called "groups," with line management the responsibility of a "group leader" (GL).

The collective bargaining contract at Mitsubishi focuses on labor and management's obligation to create and maintain a non-hostile work environment, but does little to set the precise terms of that relationship. Article I of the contract lays the foundation for this objective:

> The Company and the Union pledge to maintain a genuine and unreserved spirit of cooperation between all parties concerned in order to achieve and promote harmonious labor relations. The bedrock of cooperation is

> respect and dignity for each person. To attain the highest degree of cooperation from all parties there must be unqualified trust in each other.

The Company's responsibilities are understood to include:

> a safe work place, equitable wages and benefits and will promote an environment based on the teamwork concept, which establishes "Wa" or "harmony among people" in a non-adversarial environment that promotes mutual trust and respect.

The Union's obligations include:

> long term cooperation in the recognition and commitment to the principal of flexibility that the Company must have to maintain and improve quality and efficiency and to the implementation of work practices and flexible production systems (*UAW-MMMA Contract* 1995: 2-3).

Therefore, in the social organization of work at Mitsubishi Motors, concepts like trust, cooperation, flexibility and teamwork are declared to be central to achieving mutual benefits. Yet nowhere in the contract are structures established which formalize this commitment. Beyond the above declarations, the contract is silent on what Womack, Jones and Roos understood as being central to employee involvement and satisfaction.

Interview and Comparative Survey Findings

When Diamond Star began production in September of 1988, the production and maintenance workers approached their jobs with great anticipation. Not only did these jobs offer workers significantly higher wages than most had made previously, they came with promises of employee empowerment. As is typical in lean production, each

employee was thoroughly screened for basic mechanical skills as well as their ability to work in a team. In reflecting on that period in the company, one production employee concluded, "I can't describe to you how proud I was to work in such a clean plant. I was told repeatedly during the first two weeks of orientation how special I was to be hired… and I do remember all the phases I had to pass to become an employee…" It was in the summer of that year that Chapman, Elhance and Wenum surveyed a sample of 250 employees on their opinion of the work environment at Mitsubishi. The workers it seemed were quite happy in their new work environment.

The research results reported by Chapman, Elhance and Wenum combined with the exploratory interviews and the more recent employee survey provide a provocative sketch of the evolution of lean work in this greenfield site. In the 1989 survey, workers where overwhelmingly positive about their experiences working at Diamond Star (see Table 1). From options which included, "Very Negative," "Negative," "No Strong Feelings," "Positive," and "Very Positive," workers expressed their attitudes on a host of work-related subjects. By collapsing all negative work was a strong indicator of feelings. A robust 70.8% of workers with more than seven years of experience held negative views toward upper management, considerably more than the 39.2% of employees who held such views after working less than three years at the Bloomington-Normal plant.

Finally, in contrast to 1989 expectations only 29% of the present workers thought that their work had advanced their personal development, and the number of people who had a positive impression of Mitsubishi. Eight years later significantly different results are found. Only a quarter of the respondents (25%) now viewed their work environment in a positive light and even fewer (22%) rated their group leaders in a positive way.

Workers with 7-9 years of experience expressed greater dissatisfaction (39.6%) than those employees with 1-3 years of service (27.6%). In 1989, nearly 50% of workers had a positive attitude about upper management, but only eight years later; a paltry 6.6% shared such views of company leaders. Here again, time at work was a strong indicator of feelings. A robust 70.8% of workers with more than seven years of experience held negative views toward upper management, considerably more than the 39.2% of employees who held such views after working less than three years at the Bloomington-Normal plant.

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Finally, in contrast to 1989 expectations only 29% of the present workers thought that their work had advanced their personal development, and the number of people who

had a positive impression of Mitsubishi's products was cut almost in half. Importantly, negative feelings about the work itself had risen from 17% to approximately one-third of the "associates." Familiarity was a factor here also. A little more than one fifth (21.6%) of those workers with 1-3 years of seniority held negative views about the work they were doing. But over a third of the workers (36.2%) employed within one year of the plant's opening was dissatisfied. In summary, by 1997 workers were less positive about promotion possibilities, the inherent dignity of their work, product quality and personal growth. The only area where workers satisfaction has improved was in their wages and benefits.

Table 1

Employee Satisfaction at Mitsubishi Motors

1989 and 1997

Characteristic	% Negative		% Positive	
	1989	1997	1989	1997
Wages	13.7	5.2	51.5	85.8
Working Environment	11.3	37.2	66.2	25.4
Group Leaders	18.2	47.3	46.9	22.7
Upper Management	18.1	63.1	40.8	6.6
District Managers	14.1	52.2	43.8	10.2
Colleagues	3.0	15	74.2	49.7
Union Activity	37.0	22.9	21.0	19.9
Benefits	21.4	7.7	41.3	78.9
Work Satisfaction	17.7	32.8	56.5	34.8
Pride at Work	8.5	19.2	79.3	61.9
Personal Growth	21.8	35.7	57.4	29.1
Promotion	38.1	47.3	30.4	8.6
Union District Representative	N/A	23.1	N/A	32.1
Quality Circles	N/A	62.1	N/A	6.7
Union Contract	N/A	37.3	N/A	29.7

Products	5.6	14.6	87.8	49.4
DSM-Type Collaboration	6.7	N/A	72.2	N/A

Source: 1988 data Margaret Chapman, Arun Elhance and John Wenum, *Mitsubishi Motors in Illinois,* (Westport: Quorum Books 1995, 46); 1997 data based on authors' survey.

Exploratory interview sessions offered explanations for the altered worker attitudes later reflected in the survey. In interview after interview employees noted changes that had occurred at Mitsubishi over the course of the eight years. Workers who had been at the facility since it opened noted that they had once felt that the company had cared about them and welcomed worker inputs into the production process. In the beginning, the company had daily exercise and group meetings. On the line, they had full rotations and cycle times that workers considered reasonable.

However, according to interviewed workers, as the company needed to increase production, much of the above practices was discarded. One worker explained, "I started out driving a fork lift, four years later, once I got on the assembly line I learned about the over cycled jobs, parts that wouldn't fit, bad rotations and plain poor quality." Other workers said that it wasn't just that the company had changed, but that their expectations were never fulfilled. They had come into the company believing that "this manufacturing job would be different, better," but those hopes had simply not been fulfilled.

Conversations with employees at Mitsubishi revealed a common grievance over promises of empowerment and the consequent lack of employee input into the work place. For example, most of the workers interviewed saw the intensive hiring process as a source of disappointment. The company's selection

process continues to be intensive with several days of screening and testing before an individual is hired. During the process, the company continues to emphasize its involvement of employees in decision making and the role of "kaizen" in the functioning of the plant. Workers at the facility indicated that the company hires a highly educated work force. Indeed many of the workers have college degrees. Workers explain that the company tells new hires that they will be asked for their input, but then contrary to promise, treats them as typical "beasts of burden," manufacturing workers. One worker who had held several factory jobs previous to coming to Mitsubishi summed up the situation by saying, "If you hire some dummy who is used to being a grunt, he'll come to work, work hard, take the paycheck and leave. But if you hire the folks the company seems to focus on, they're always on their way to a better job; and if not, they actually come in expecting the company to listen to them. They get real disappointed."

In summary, interview sessions strongly suggested that employee dissatisfaction with Mitsubishi rested in three areas: lack of trust in management, lack of control over their work and that lean production had become "mean." Survey results clearly reinforced each of these feelings of discontent. In the section that follows, 1997 survey findings in each of these areas are reported.

1997 Survey Findings

Lean Production is "Mean" Production

Workers were asked a series of questions about their workpace and intensity, and also to describe how their jobs had changed. When asked in the survey to compare their jobs to two years ago, 50% of respondents said their job had become "more tense" and

47.7% reported being "more tired" at the end of a shift. While a significant number of workers across plant departments felt more tired (stamping-35.1%, body shop- 41.4%, paint-41.3%) over half (53.7%) of the people assigned to the trim and final assembly area expressed such sentiment. In addition, approximately 29% believed that their workload had gotten "heavier" and 45% said the work pace was "faster." Again more workers doing trim/final assembly jobs (34.7%) experienced increased production demands than any other employees (stamping-19.3%, body shop-24%, paint-20.6%) did. Not suprisingly, significantly more trim/final assembly employees (54.5%) than stamping workers (12.3%) also believed the workpace had gotten faster. Finally, one-fourth of the respondents reported that their degree of job rotation had been "decreased" from a couple of years ago (see Table 2).

Table 2

Compared with a couple of years ago, would you describe your current job as:

		N
More tense	50.1%	517
The same	34.5%	356
Less tense	15.1%	156

How tired have you been lately after finishing work?

		N
More tired	47.7%	490
The same	43.3%	445
Less tired	9.0%	93

Is the physical workload on your current job:

		N
Heavier	28.9%	291
The same	59.0%	594
Lighter	12.1%	122

Is the work speed or work pace on your current job:

		N
Faster	44.7%	454
The same	48.8%	495

Slower	6.5%	66

Has the degree to which you rotate jobs:

		N
Increased	16.4%	165
Decreased	25.4%	255
Stayed the same	58.1%	584

Workers responses to a series of questions about work pace also suggested that a form of old fashion "speed-up" had been imposed. When asked, if there were "enough people in your area to do the work assigned," 55.5% answered "too few" or "far too few." In addition, despite company assurances that adequate relief staff would be provided in all areas, 52.6% of workers said there were "too few" or "far too few" available. Feelings of being overworked were further expressed by noting that 43.3% of respondents "felt exhausted" after their shift "every day" or on "most days" (see Table 3).

Table 3

Are there enough people in your area to do the work assigned?

		N
Far too many	.6%	6
Too many	3.0%	31
About right	41.1%	432
Too few	43.3%	455
Far too few	12.0%	126

Is there adequate relief staff in your work areas so that you can easily leave the line to attend to personal matters?

		N
Far too many	.6%	6
Too many	.7%	7
About right	46.1%	468
Too few	34.1%	346
Far too few	18.5%	188

In the last month, how often have you felt exhausted after your work shift?

	N

Every day	16.7%	175
Most days	26.8%	281
Half the time	21.0%	221
A few days	30.9%	324
Never	4.7%	49

The meaner qualities of lean production may also arise from many workers' contention that the company is trying to force more work out of people than is possible in the time allotted. For every assembly-line job, Mitsubishi establishes a cycle time of .54 seconds per job. Cycle times refer to the amount of time each line worker has to complete his or her job. While workers have different assigned jobs (ex. tightening a lug, installing an engine), every job on the line has an identical cycle time. Respondents were asked if their current job was "overcycled" or in effect, did the company over-estimate how much work could be done in the .54 second time period? While a majority of workers felt that the cycle times were not unreasonable, a significant proportion (38.2%) did. In addition, 37.5% said that they had "too little" or "far to little" time to do the work assigned. The lack of time to complete assignments then forced 71.5% of respondents to work at least half of the work day "as fast" as they could to avoid falling behind (see Table 4).

Table 4

Is your current job overcycled?

		N
Yes	38.2%	404
No	57.1%	604

How much time do you have to do the work currently assigned?

		N
Far too much	.9%	9
Too much	3.2%	33
About right	58.4%	605

Too little	31.9%	331
Far too little	5.6%	58

For what part of each day do you work as fast as you can so you don't fall behind?

		N
All day	14.5%	150
75% of the time	29.1%	301
50% of the time	27.9%	288
25% of the time	16.7%	172
Never	11.8%	122

A significant number of respondents also indicated that it was difficult to change their work pace. While 23.9% agreed that they had either "a lot," or "a great deal" of opportunity to change their work pace, 42.2% noted that they had either no ability or only a little flexibility to vary the speed at which they worked. Stamping workers, however, enjoyed much greater flexibility than their brothers and sisters in other areas. Only 22.4% of stamping workers believed they had little or no opportunity to vary their work pace. But exactly half of the on-line workers (ex. trim/final assembly) complained about little or no opportunity to alter their pace of work. Another 33.9% of all workers said they had only "some" chance of controlling the speed at which they worked. Perhaps this partially explains why 57.5% of survey participants said they worked at least half the time in "physical pain" and a quarter of them admitted to working this way "every day" (see Table 5).

Table 5

Over the course of a working day, how much can you vary your pace of work?

		N
A great deal	10.9%	115
A lot	13.0%	137
Some	33.9%	357
A little	28.2%	297
Not at all	14.0%	148

In the last month at work, how many days have you worked with physical pain or discomfort?

		N
Every day	25.6%	269
Most days	19.7%	207
Half the time	12.2%	128
A few days	29.5%	309
Never	13.0%	136

There are two additional indications that workers now believe that changing production demands have undermined company promises of a worker-friendly workplace. Workers were asked how easy it was "over the last two years" for them to get time off to attend to personal needs such as doctor's appointments, family weddings or to minister to an ill child. Despite company rhetoric about employee involvement and empowerment, a hefty 60.9% of respondents agreed that it was either "difficult" or "very difficult" to get away from production demands. At Mitsubishi overtime has been plentiful and required. The median work time for a two-week period was 86 hours and 31.3% of respondents punched in at between 87 and 100 hours. Consequently, 50.3% of survey participants admitted that at least half the time their work schedules "increased stress on family members" (see Table 6).

Table 6

Over the last two years how easy was it for you to get time off to attend to personal needs?

		N
Very easy	5.5%	57
Easy	33.6%	347
Difficult	35.0%	361
Very difficult	25.9%	267

How often does the amount of overtime you work take its toll on you and your family?

N

Every day	8.7%	91
Most days	18.1%	190
Half the time	23.5%	247
A few days	39.9%	419
Never	9.7%	102

No Control, No Power

Discussions with workers pointed to a serious disenchantment with company measures to share production decision-making. As noted earlier, Mitsubishi Motors of North America had extensively imported the technical elements of lean production. But interviewed workers complained bitterly about the lack of shopfloor social features, which were expected to increase worker involvement. One central feature was the use of quality circles (QC). When the plant was opened quality circles were ubiquitous. But eight years later only 33.9% of respondents stated that they had a "functioning quality circle" in their work area. Despite the contemporary absence of circles, workers' experience with them was widespread. Only 7.5% of respondents admitted to never having been part of a QC.

However, exposure to QC did not improve workers attitudes about management's commitment to employee empowerment. When asked to rate their "experience working on a QC project," 58.5% of respondents considered it "unfavorable," or "very unfavorable." There was universal discontent across departments with QC, although paint shop employees recorded higher unfavorable responses (69.9%) than their peers (stamping-52.4%, body-60.4%, and trim/final assembly-56.4%) did. In fact only ten percent of all workers rated their experience "favorable," or "very favorable." As noted earlier, 6.7% of workers now had a positive attitude about QC, compared to the 62.1% who felt negatively. This dramatic difference is probably best explained by the

realization that 57.9% of surveyed workers felt that “management” exclusively benefits from QC. On the other hand, less than a third of respondents said that “everyone” benefits from QC (see Table 7).

Table 7

How would you rate you experience working on a QC project?

		N
Very Favorable	3.0%	29
Favorable	7.8%	76
OK	30.8%	302
Unfavorable	31.1%	304
Very Unfavorable	27.4%	268

Who benefits most often from QC projects?

		N
Management	57.9%	560
Workers	11.0%	106
Everyone	29.8%	288
No one	1.3%	13

A random sample analysis of 24% (n=261) of survey comments reveals a great deal about why workers hold such unfavorable views about QC. Each sampled set of comments was recorded verbatim and then categorized according to the quality of their content. The most numerous (N=84) comments included the following phrases: “only happens to benefit management,” “never happens,” “no one cares,” “nothing gets done,”

"good ideas go to waste," "not enough time allowed" and "it's a joke." Comments are particularly ripe with worker frustrations over management's unwillingness to allocate sufficient time to QC. Consider the following time related complaints: "Projects are expected but no time is allowed to prepare data," "Hardly ever allowed time," "The problem is getting the needed time," "Most supervisors put other items first such as getting the line caught up," "Time is not available to work on due to other OT (overtime) worked," "We keep the line running," "Not enough time set aside to stay up to date," "Not enough time to work on a project," "We almost never get time," "No one takes the time to be involved," "We never have any time to do one."

Workers are also deeply suspicious of management's motives. Numerous comments about company self-interest include, "Its only important on management's job performance," "Any time my group comes up with something we think would help us in our area...management says NO," "Management runs it," "I believe the company benefits," "When your project is censored to please management and selected by management then it only projects what management wants to see," "Mostly to make management look good," "Management gets pat on the back for it," "All were run by management...associates (workers) didn't have a prayer," and "Ideas favoring to worker are never looked at, but if they favor the company management sucks it up!"

Respondents' attitudes were similarly negative and hostile about kaizens. Nearly one-half (49.4%) of respondents had a negative impression of kaizen (see Table 8). Worker comments were illustrative of why the idea and practice of "continuous improvement" was no longer respected. Many said they opted out because either the group leader was taking their ideas and relaying them as his/her own, or because they felt

favoritism was given to friends of the group leader as a way for “suck-ups to get some overtime.”

Table 8

How do you feel about Kaizen?

		N
Very Negative	27.6%	287
Negative	21.8%	226
No Strong Feelings	37.2%	387
Positive	9.8%	102
Very Positive	3.6%	37

Workers often spoke of broken promises and ideas stolen by group leaders from employees. One surveyed employee provided us with a copy of a letter written by a group leader to upper management. In that letter, the group leader explained that in return for “kaizening” out a job, the group would maintain the person, as a utility worker who would help when needed. Based on that promise, the workers eliminated a job and increased their own work speed. Only three days later the utility worker was removed and placed in another group. The GL then wrote an impassioned letter of complaint to his superiors indicating that such behavior reduced the associates willingness to participate in such projects. Workers on the shop floor saw the GL as a hero, but many expressed fears that he might suffer management reprisal. Incidents like this were repeatedly noted by workers and seem to have significantly led to their negative attitudes.

Respondents also stressed that kaizen appeared to have lost its daily relevance. While the company continues to encourage the presentations of new ideas and awards the best presenters a trip to Japan, because the focus is now on competing for big prizes, smaller yet productive suggestions are often over looked and the nature of continuous improvement lost. Worker involvement has also been discouraged in a more traditional

and adversarial form. While they still technically have the right to do so, workers on the line have been discouraged, through both formal and informal discipline, from using their stop buttons to control the line speed. Consequently, many workers noted in very harsh terms that they felt that poor quality is now being built into the vehicles they manufacture.

The frustration workers feel towards QC and kaizen may be a product of the actual structure designed to facilitate joint decision making. For example, in his discussion of teams, Babson (1995) poses the question "whose team"? At Mitsubishi, the answer to the workers is clear. As members of management, "group leaders" lead group meetings, assign work and determine rotations. The exact nature then of the relationship between the GL and the group is determined more by the personality of the GL than by the general culture of the facility. Under the terms of the most recent contract, each group could also have an elected bargaining unit member "team" leader. However, the presence of a team leader is at the discretion of management and according to interviewed and surveyed workers the company has rarely exercised its prerogative. But even if such positions existed, it is not clear what the role of the individual would be. In an interview, one employee noted that when he made suggestions about how to improve production, he was told by a group leader, "take your $20 (average hourly rate) an hour and shut up."

Along with the extreme antagonisms workers revealed towards the company's commitment to QC and kaizen, they also expressed their feelings of powerlessness in other ways. Workers initially expected and had a comfortable degree of discretion and freedom to organize and complete job assignments. But now the opposite appears to be

true. According to 40.1% of respondents, over the last couple of years there has been a significant increase in how closely their "work performance is monitored by management." An increase in conventional top-down supervision then explains in part why only 5.5% of respondents said that it was "easy" to "change the things you do not like about your job." The fact that 80% of survey participants noted that bringing about change was "difficult," or "very difficult" seriously challenges any illusions about worker empowerment existing at Mitsubishi Motors (see Table 9).

Table 9

Compared to a couple of years ago, how closely is your work performance monitored by management?

		N
Much closer	13.5%	139
More closely	26.6%	274
The same	46.2%	477
Not closely at all	13.8%	142

How easy is it for you to change the things you do not like about your job?

		N
Very easy	1.0%	10
Easy	4.4%	45
Neither easy or difficult	13.9%	144
Difficult	28.7%	296
Very difficult	50.9%	538

Trust What?

A fundamental orientation to the concept of trust emphasizes an individual's judgment of the subject to be trusted. Trust in this sense derives from a subject's "trustworthy attributes." While the literature on trust (Clark and Payne 1995) mentions different "bases" for judgment, Gabarro (1978) established that certain elements of trustworthiness, like the subject's integrity, consistent behavior, loyalty and competence, are most important. Therefore, research on worker trust in Mitsubishi management

included an effort to assess these prioritized items.

Integrity

The attribute of integrity derives from management's sincerity in fulfilling a promise to implement legitimate employee involvement programs. The key question then, was management being truthful about desiring employee participation? Now because truthfulness is not best captured by all or nothing choices, a degree of honest behavior was identified. Therefore, instead of querying if management was trustworthy, workers were asked, "how trustworthy is management"? The answer given by nearly three-quarters (72.7%) of the respondents was "not very often," or "never." Unfortunately, time served only aggravated the trust issue. A third (33.4%) of the most senior workers judged management never to be trustworthy, while 24.7% of their most junior peers felt the same. While about a quarter (25.3%) admitted to trusting management "sometime," only a minuscule 2% said, "all of the time" (see Table 10). These results along with survey comments suggest that after eight years of lean production a super majority of workers have come to seriously question the company's integrity.

Table 10

How trustworthy is management?

		N
All the time	2.0%	21
Sometime	25.3%	264
Not very often	40.7%	424
Never	32.0%	334

Consistent Behavior

Another key component to building trust is a retrospective assessment of how

reasonable and fair the subject being trusted has been. When asked about management policies at Mitsubishi, more than twice as many survey respondents answered "unfair," or "very unfair" (53.7%) than said "fair," or "very fair" (22%) (see Table 11). As was explained in worker comments about QC, the company is perceived as inconsistent in their behavior toward individual employees, groups, GL and supervisors. Workers complained about biases, favoritism and self-serving motives. Respondents judged management's behavior to be unfair, because they believed that it was not based on sound objectives. This lack of a consistent standard for evaluating contributions strongly suggests to workers that company policy is driven more by bias and subjectivity than knowledge and good judgment.

Table 11

Are management policies reasonable and fair at this workplace?

		N
Very fair	2.4%	25
Fair	19.5%	203
Neither	24.4%	254
Unfair	29.3%	306
Very unfair	24.4%	255

Loyalty

A third damaging assessment of management's trustworthiness was delivered by the meager ten percent of workers who felt that management was interested in their welfare. It is significant to note that despite the company's intense employment screening procedures, a whopping 49.1% of junior employees (1-3 years) held the view that MMMA was either barely interested or not interested at all in the workers' welfare. Consistent with other relationships, the negative view of management's concern for their associates only got worse over time (74% of most senior workers). With nearly 70% of

all respondents denying any managerial interest in their well being, workers have raised serious questions about management's motives and intentions (see Table 12). Who is meant to benefit from an exchange of employee ideas? What is the reward for worker loyalty to company directives? According to survey participant comments, employee participation is "not really a benefit to associates [workers]," and when "it [participation] makes sense Mitsubishi doesn't do it," so "Why do a QC project that could save the company millions and all they will give you [worker] is a MMMA duffel bag." It would seem that workers believe that the imposition of lean production elements has little to do with employee empowerment or satisfaction.

Table 12

How interested is management in your welfare?

		N
Very interested	1.6%	17
Interested	8.4%	88
Neutral	21.5%	225
Not usually interested	32.5%	340
Never interested	36.0%	377

Competence

Finally, in order to signify competence as an attribute of trust, workers were asked to evaluate the performance of their immediate supervisor. While the questionnaire did not explicitly refer to "competence," the fact that nearly twice as many (45.3%) respondents were "dissatisfied" as were "satisfied" (25.4%) with their supervisors suggests that group leaders are not seen as experts (see Table 13). Tenure at the facility did raise the level of dissatisfaction from 37.5% (1-3 years) to 47% (7-9 years). The only variation in work area responses was that stamping workers were some what less dissatisfied (34.5%) than other employees (body-45%, paint-48.1%, trim/final

assembly-46.7%). Worker comments that there is "no management training," and consequently, "no one knows exactly how to do QC projects," or complaints about a "lack of leadership and directive purpose," do little to invite confidence and trust in management's technical skill to implement worker participation projects.

Table 13

How satisfied are you with your immediate supervisor?

		N
Very satisfied	7.3%	76
Satisfied	18.1%	189
Neutral	29.4%	307
Dissatisfied	23.7%	247
Very dissatisfied	21.9%	225

Conclusion

MMMA is clearly a lean production facility in terms of its technical organization of work. The company also remains bound by the rhetoric of empowerment and equity. Yet, in stark contrast to the attitudinal survey conducted in 1989, the 1997 survey results and interviews revealed a workforce severely disappointed in their work lives. Workers felt that lean production had grown mean and expressed disillusionment over the unfulfilled promises of quality circles and continuous improvement. The only reported area of increased worker satisfaction was in contractually provided wages and benefits. This research thus supports a growing body of literature on the auto industry (Babson 1995; Rinehart, Huxley and Robertson 1995; Adler 1995; Kaminski 1996; Juravich 1996; Lewchuk and Robertson 1997) that argues that there is nothing about lean production that inherently creates empowered workers.

It is important to note that UAW Local 2488 is not an example of a

recalcitrant union, stuck in the adversarial labor relations mode of the 1930s. Since the plant went on-line, the union has worked cooperatively with the team concept. In fact, the union has often taken the lead in adopting new work arrangements. Along with participating in several joint employee assistance programs, the local has since 1992 bargained for a joint quality-control program.

Nor has the union been just a parochial, bread and butter bargaining partner. While union bargaining strategies have included wage increases, the issue has not been continuous. Beginning in 1989 when production workers were paid $9.95 an hour, the company committed itself to a parity arrangement with the Big Three. By 1992 the hourly rate differential had collapsed to less then a dollar and has since been met. In addition, it was the union who negotiated for greater flexibility in conducting shift rotations. The company had originally won the right to limit rotations to one-year cycles. However, in subsequent bargaining the union reduced this time to four months and in the negotiations completed in the summer of 1998 was unsuccessful in further reducing that time to one month. The company insisted that one-month cycles would permit far too much work shifting.

The union was also receptive to the adoption of “team leaders.” In the 1995 negotiations, the company recommended creating a bargaining unit leader position for every team organized. After agreeing that the position would carry no managerial responsibilities and be fairly compensated, the union gave its blessing to the concept. However, since gaining acceptance of its proposal, Mitsubishi has repeatedly rebuffed union efforts to implement the position.

In addition to bargaining strategies, the local has demonstrated its commitment to jointness in its approaches to shopfloor problems. For example, despite growing worker disenchantment with management, unit stewards have continued to meet monthly with upper management to discuss shopfloor issues before they become formal grievances. Most importantly, Local 2488 has never sanctioned or participated in a work stoppage of any type. It is also worth noting that Mitsubishi granted voluntary union recognition on the basis of a card check. Not only was a National Labor Relations Board election unnecessary, but not a single anti-union message was communicated by the company during the organizing drive. It seems then, by most reasonable standards, that Mitsubishi Motors has had a cooperative union partner, serious about discarding the alienating Fordist approach to making cars.

What seems to emerge from case studies of worker empowerment in lean production and in industrial workplace settings governed by managerial decision-making and "job-control" unionism (Roy 1952; Baldamus 1961; Burawoy 1979; Noble 1984; Belanger 1994; Herzenberg 1994; Merrill 1996), is that employees try to find ways to control their work. To the extent that workers have confidence that they can exert some degree of decision-making power, they are more likely to feel empowered. Consequently, in lean production facilities, workers must be able to trust not only management's intentions, but also the integrity of the workplace transformation process.

At a minimum then, worker empowerment requires some assurances that management will not unilaterally alter the rules of joint participation. In an

environment like that at MMMA, issues of trust become particularly important, because the social organization of production is at management's discretion. One possible way to raise the cost of unilateral action and to improve the environment for trust to occur is to contractually embed the mechanisms for involving workers in workplace decision-making. Building trust between reluctant parties takes more than agreeing on goals and outcomes. Trust is also a product of equally applied enforceable rules. Thus, the specific nature of the collective bargaining agreement (i.e. grievance process, right to arbitrate, rules for joint committees) could become critical in determining the impact of lean production systems on employee empowerment.

The analysis provided here adds to the findings of other studies (ex. CAMI), that as workers acquire more experience in a lean production setting, their positive estimations of the environment decline. The answer to why deterioration occurs likely includes a number of managerial practices and decisions baring only indirect connection to worker satisfaction. In Mitsubishi's case the company has suffered from substandard, out-sourced parts production, extended in-plant repair work and poor JD Powers ratings. The plant remains technologically advanced, but due to industry-wide improvements it no longer differs much from the competition. The company has also annually re-tooled its cars "from front to back" and chosen to assemble its product styles in mixed fashion (i.e., a large two-door is followed down the line by a four-door, then a small two door, followed by another four door…etc).

While the above items represent only a suggestive list of additional

problems, they likely have contributed to Mitsubishi's inability to annually produce the 240,000 cars projected for the Normal plant. Producing, however, at less than 100% capacity has not been for want of trying. For at least half of the plant's existence workers have pushed production at accelerated levels. Working two out of three Saturdays, nine and ten hour days and mandatory overtime have been common practices for production employees. Recognizing that full throttle production has been routine at MMMA is important to challenging any notions that somehow something changed a benevolent team manufacturer of cars into an old school, "production at all cost" company.

The question remains, however, whether or not deterioration in employee attitudes is inevitable. It would appear from the 1997 survey results, comments and interviews of Mitsubishi workers that negative attitudinal change is likely if management is perceived as acting in their own narrow self-interest. While corporate self-interest is not an unexpected motivator, when management introduces a lean production systems it raises institutional expectations that differ considerably from Fordist approaches. In other words, worker empowerment and satisfaction are expected to be produced as surely as automobiles. Henry Ford never had the former in mind. It seems therefore, that at Mitsubishi lean production is producing neither profitable products nor happy workers.

Whether market or plant design variables break for or against the producer it is our contention that worker perceptions, based on expectations and subsequent years of experience, are critical to the successful implementation of workplace change. Now under the very best of workplace situations, worker attitudes about

management can be difficult to categorize. However, when attitudes about lean production are formed as they were at MMMA, within an environment which violated expectations of shared decision making, worker support is never secure. As a result, changing worker attitudes seem inevitable.

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