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Changing Work Systems, Changing Social Relations? A Canadian General Motors Plant

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Résumé de l'article

Cet article présente quelques conclusions tirées d'une étude ethnographique portant sur les relations sociales dans une entreprise d'assemblage de véhicules où la chaîne traditionnelle fut remplacée par une technologie suédoise automatisée et où quelques aspects de l'organisation japonaise du travail furent implantés. Cette usine de General Motors à Oshawa (Ontario) est intéressante en ce que non seulement y trouve-t-on une approche hybride de deux modèles de travail mais en plus y retrouve-t-on une main-d'œuvre qui était en grande partie la même avant et après ces changements.

Le syndicat des Travailleurs canadiens de l'automobile (TCA) regroupent ces employés et le comité d'atelier a traditionnellement eu une réputation de militantisme relatif. Nos conclusions remettent en question l'idée que le fordisme est en train d'être supplanté par un nouveau modèle de production résultant dans un travail plus satisfaisant et dans des relations sociales plus coopératives.

Résumons de la façon suivante les relations en milieu de travail durant les premiers dix-huit mois d'opération. Les travailleurs ont apprécié de façon presque unanime d'une part le nouvel environnement de travail amélioré par la technologie et, d'autre part l'engagement de la direction envers la qualité. Une promesse de départ s'est cependant vite dissipée vu l'intensification du travail sous le nouveau système et suite au recours par la direction à des tactiques traditionnelles pour assurer la production. En est résulté une période de relations hautement contradictoires entre négociations, discipline et efforts pour atteindre et même dépasser les objectifs de production. Cette tourmente fut suivie par un accommodement stabilisant les relations, maintenant caractérisées par une acceptation pragmatique du fordisme plutôt que par l'engagement prévu par les tenants des modèles post-fordistes.

L'analyse de ces dynamiques d'atelier démontre que même si plusieurs perspectives théoriques apportent certains éléments pertinents, aucune n'explique la complexité des rapports sociaux de travail. La nouvelle technologie a eu des effets indépendants sur l'expérience de travail, positifs et négatifs, mais n'a pas déterminé pas les relations de travail. Tant le modèle de choix stratégique que la théorie sur le procès de travail n'ont pu expliquer pourquoi la direction a eu recours à des tactiques coercitives inspirées d'éléments motivationnels du nouveau système de travail. Les problèmes d'implantation sont certes inévitables, mais ils ne constituent aucunement une explication suffisante.

Notre propre explication emprunte de l'approche axée sur la production du consentement (Edwards 1986 ; Bélanger, Edwards and Haiven 1994). Plus spécifiquement, il y a contradiction entre contrôle et consentement : la présence accrue de contrôle, surtout de type coercitif va entraîner la résistance des travailleurs. Cependant, un contrôle moindre ou insuffisant peut résulter en une productivité et une qualité en deçà des normes acceptables. Le résultat en est que la négociation, le conflit et la coopération sont au cœur même du travail et n'apparaissent aucunement comme un accident de parcours. Il faut donc que cette contradiction soit amenuisée ou éliminée pour que l'engagement et des relations consensuelles prédominent.

Nos résultats, suite à l'études de cette usine et de d'autres lieux de travail, suggèrent plutôt que la contradiction entre contrôle et consentement a été exagérée au sujet des systèmes fordistes. Un thème commun est cependant celui de la désillusion des travailleurs face à ces nouveaux systèmes de travail suite aux différences entre les promesses et les résultats vécus. Nous explorons les aspects matérialistes et subjectifs des tensions ainsi créées. Plus la gérance stimule les intérêts de production des travailleurs afin d'atteindre le consentement, plus il y a de risques qu'il y ait efforts subséquents de la gérance de contrôler la production seulement selon sa propre logique. Il faut donc conclure que la situation actuelle, tant au niveau macro que micro, ne présage aucunement un abandon significatif des relations fordistes de production.

Changing Work Systems, Changing Social Relations?

A Canadian General Motors Plant

LOUISE CLARKE

This article presents some findings of an ethnographic case study on social relations in an existing vehicle assembly plant where the traditional drag chain has been replaced by Swedish automated guided vehicle technology and some aspects of Japanese work organization have been implemented. The findings challenge claims that Fordism is being replaced by a fundamentally new production model, and that this is resulting in more fulfilling work and cooperative social relations. There are many continuities with Fordism and highly contradictory social relations. This and other studies of new work systems suggest, in fact, that contradictions between control and commitment, rather than being minimized or dissolved, can actually be heightened.

In the period 1986–1989, General Motors spent millions of dollars to rip the drag chain technology out of three assembly plants at "Autoplex" in Oshawa, Canada, and to replace it with Swedish automated guided vehicle (AGV) technology. This represents the first large-scale installation of this technology under mass production conditions in North America.[1] In addition to the technological change, local management decided to make some organizational and labour relations changes in its dealings with the workforce

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1. AGVs are platforms designed to transport various components of vehicles – engines, bodies, chassis – silently around the shopfloor guided by electrical impulses from cables embedded in the floor. Electrified monorail carriers (EMCs) are also used to transport smaller elements such as instrument panels and doors. There have been small-scale installations of AGV technology in some GM plants on an experimental basis. In Sweden, this technology is used primarily in commercial truck and bus assembly plants where volumes are quite low. Even in the Kalmar and Uddevalla auto plants, volumes are considerably lower than at Autoplex.

returning to the refurbished plants. These changes were borrowed from NUMMI, the GM-Toyota joint venture in California, and included just-in-time inventory, making workers responsible for their own quality inspection and repair, and a more open, consultative relationship with the union. In the language of senior managers at Autoplex, the new system was like an "imposed significant emotional event" (SEE) which would instill worker "buy-in."[2]

This article is based on an ethnographic investigation of the ensuing relations in one of the Autoplex assembly plants, Plant X (Clarke 1992),[3] and it interprets the results of that research in the context of current debates on new work systems. Specifically, it explores the propositions that vehicle assembly work is being fundamentally changed and that shopfloor life under these new work systems is characterized by fulfilling work, "buy-in" or consent and cooperation rather than the alienation, resistance and conflict associated with Fordism (for example Walton 1985; Womack, Jones and Roos 1990). To anticipate, the work system of Plant X showed strong continuities with Fordism as well as some important changes. Workers almost universally appreciated the improved work environment created by the new technology and management's commitment to quality. A promising beginning for workplace relations soon dissipated, however, as work under the new system was intensified and management reverted to traditional tactics to ensure production. The result was a period of highly contradictory relations with cross-currents of conflict as well as cooperation. After about 18 months, the parties reached a new accommodation. In other words, buy-in proved to be very difficult to achieve. Also, we can say that the either/or nature of the propositions is too simplistic, at least in the case of Plant X, but it does usefully frame the empirical and theoretical debates at this point.

With respect to the substantive issues, there is considerable consensus on some general attributes of the system that will replace Fordism. Instead of rigid technology, the separation of thinking and doing, and the close supervision of Fordism, the new system is supposed to provide flexibility, quality and low cost in vehicle production through the use of microelectronic technology, a multiskilled workforce working in teams, and an emphasis on employee discretion and problem solving (Geary 1993). Beyond this, however, there is considerable debate regarding actual practice. Do

2. The use of the term "significant emotional event", borrowed from psychology, was common in GM, deriving from the observed improvement in worker attitudes and behaviour at NUMMI as a result of an extended layoff period (Turner 1988).

3. I cannot identify the plants more specifically in order to protect the confidentiality of the participants in the study.

the work systems actually implemented represent a clear break, or strong continuities with Fordism (Wood 1989, 1995)? Are there in fact a number of contending models with important distinguishing features (Appelbaum and Batt 1994)? The models of relevance to Plant X are the "lean production" or "total quality manufacturing" (TQM) model, epitomized by NUMMI in North America, and the "human-centred manufacturing" (HCM) model, epitomized by Volvo's Uddevalla plant in Sweden.

One of the main points of contention between the two models concerns the quality and nature of worker involvement (Berggren 1994; Sandberg 1995). The HCM model stresses humanizing assembly work through ergonomically superior technology (AGVs), long and integrated jobs (rather than short and fragmented), and self-managed teams to carry out the work. Appelbaum and Batt (1994) make the useful distinction between the "on-line" participation of workers in the self-managed teams of the HCM model, and the primarily "off-line" participation of workers in problem-solving groups of the TQM model. Critics argue that the work experience in the TQM model is as bad as or worse than under Fordism in terms of physical and mental stress as well as reduced autonomy on-line; lean production is mean production (Parker and Slaughter 1988; Graham 1995). In reply, proponents assert that work is not necessarily intensified or otherwise less satisfying because workers are so involved off-line in eliminating wasted time and energy (*kaizen*); they work smarter, not harder (Adler and Cole 1994). Also according to this view, the humanization efforts of the HCM model are unnecessarily costly and limit productivity and quality, the closure of Uddevalla and Kalmar being often cited as proof.[4]

The polarizing tendency in this debate is artificial since the growing literature on work systems shows great diversity in system design and workplace relations. Many new work systems are hybrids. Adler and Cole (1994) refer to NUMMI as "democratic Taylorism," for example. In the late 1980s and early 1990s, the HCM plants of Kalmar and Uddevalla were subjected to some rationalization along TQM lines, and Toyota in Japan was beginning to implement some labour-friendly changes adapted from the Volvo plants (Rehder 1992). As for workplace relations, accounts of cooperation at NUMMI (Wilms, Hardcastle and Zell 1995) and Saturn (Rubenstein, Bennett and Kochan 1993) are countered by accounts of resistance and conflict at other TQM plants in both North America (Babson 1993; Rinehart, Huxley and Robertson 1994) and Britain (Delbridge 1995). And apparently

4. Sandberg (1995) presents evidence that Uddevalla was a success in terms of both worker satisfaction and productivity. It, along with the earlier HCM plant at Kalmar, were closed for two reasons: the impending (now aborted) merger with Renault; and union pressure to save jobs at the larger, more traditional plant at Gothenberg. Uddevalla was reopened in 1995.

there is considerable variation in social relations among HCM plants in Sweden as well (Henrickson 1994).

Since there is conflicting empirical evidence on new work systems, it is not surprising that there are widely conflicting theories regarding the links between work systems and workplace relations. Implicit in many of the claims and counterclaims is the assumption that workplace relations are determined or narrowly contingent on technological and market factors. For example, Womack (1990) argues that market forces *require* the adoption of the TQM model and that consensual relations will be the inevitable result. Strategic choice theorists (Kochan, Katz and McKersie 1986) can explain system diversity to some extent by focussing on the role of management in responding strategically to changing environments. But, they too propose that a strategy involving progressive labour policies will predominate and that labour will simply act in accordance with that management rationality because doing so is to their mutual benefit. According to labour process theorists (Edwards 1977), technology and choice are important factors, but they are, in turn, driven by management's need to control the process of production. Recently management has been changing their labour control strategy from "direct" forms, such as close supervision, machine-pacing and punishment, to more subtle forms, such as "responsible autonomy" (Friedman 1977) and "hegemonic control" (Burawoy 1979). As a result, workers willingly cooperate. Contradictory relations are not fully explained by any of these models.

The explanation developed in this paper draws on the "negotiation of order" perspective (Edwards 1986; Bélanger, Edwards and Haiven 1994). According to this theory, there is a "structured antagonism" fundamental to the employment relationship, but there is also a duality (Cressey and MacInnes 1980). Management and labour have antagonistic interests, but must also rely on each other. Workers rely on management for continued employment, and management relies on workers for productivity. Thus, there is an inherent contradiction between control and consent. Too much control, particularly of a coercive kind, and workers will resist; management cannot, however, give up too much to obtain consent or they risk a loss of productivity. As a result, negotiation, conflict, *and* accommodation, or even active cooperation, are at the very core of work, not an unfortunate intrusion as the strategic choice perspective might suggest.[5] Therefore, the key to studying new work systems is to examine fully the dynamics of the workplace rather than simply to assume either the precise form or outcomes of a particular model. For this reason, as we will see in more details below,

5. For example, Adler and Cole (1994: 49) state that the true Toyota system had to be altered for NUMMI, "*if only* to accommodate an older and more militant labor force" (emphasis added).

case study research – and the ethnographic method in particular – are the best ways to proceed (Edwards, Collinson and Della Rocca 1995).

The analysis developed in this paper suggests that the contradiction between control and consent was indeed critical in shaping social relations in Plant X. Contributing factors reflected both continuities with Fordism and changes to it. For example, the technology offered a novel opportunity for social relations based on consent, but came to be used by management in a coercive way until workers resisted and ultimately a new balance of interests was informally negotiated. The findings from Plant X, placed in the context of other workplace studies, suggest that new work systems can actually heighten the contradiction between control and consent. Logically, the contradiction would have to be minimized or dissolved for consensus to predominate over conflict in the new work systems.

The paper is organized in four sections. The first section describes the research setting and method. The subsequent and longest section discusses the patterns of workplace relations observed during start-up of the retooled plant. The third section analyses these patterns in terms of the theoretical debate. Finally, the conclusion underlines how the case study contributes to the general debates outlined on the future of Fordism.

THE RESEARCH SITE AND METHODS

The new work system in Plant X is, as mentioned, a hybrid. The particular AGV configuration results in high technological flexibility relative to Fordist and even most HCM plants. Although the work organization is not strictly Fordist, the absence of any kind of formal teams results in limited labour flexibility relative to both TQM and HCM plants. Particular emphasis will be given here to the technology since knowledge of it is essential for understanding both shopfloor dynamics and its role as an independent or intervening variable.

Once approval in principle for the AGV technology was obtained in the early 1980s, the local design team proceeded to make choices concerning its configuration in order to achieve the goals of improved flexibility and quality and lower cost relative to the drag chain. A senior manager said that there were motivational goals as well as engineering ones behind the technological choices. He summarized the system as follows:

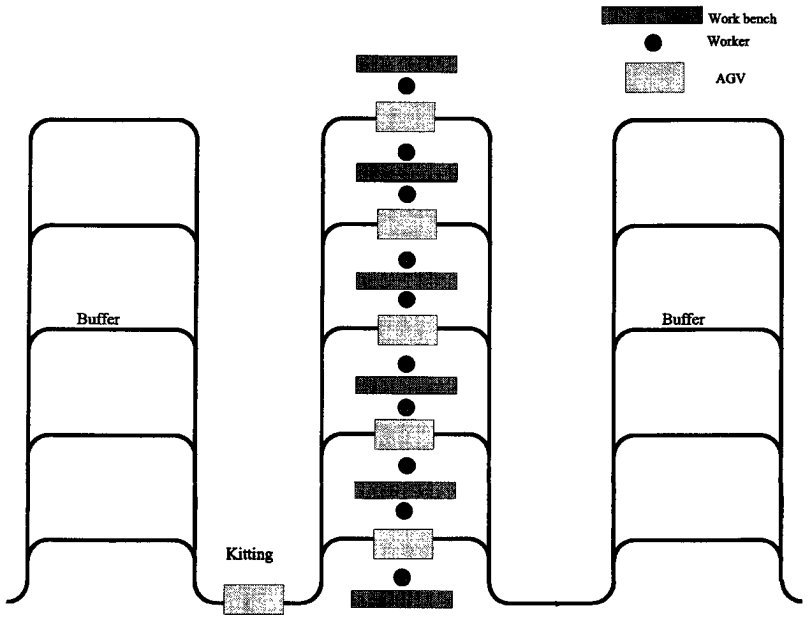
> What we were really after was parallel processing. This gives enriched jobs, more complete jobs which use people to greater advantage. It's almost a total break with Taylor. There is a lot of variety with 1 to 5-minute cycle times, variation in options, etc. People have to be responsible for quality and repair, and for releasing the job when it is done. ... It was a tough decision. In letting people release the job, we're appealing to a higher level of attitude and functioning; we've given people licence. It's a big extension of responsibility and trust.

The underlying intent was to shake workers' complacency (the imposed "SEE") and gain a commitment from them to work harder than before.

About 80 percent of the workstations are in the parallel layout with the remainder in series in the Trim and Hardware area of the plant, the primary focus of the research. That is, the AGVs (or electrified monorail carriers, EMCs) are programmed to move into one of four to seven workstations or "spurs" in a work "island" (figure 1).

FIGURE 1

Parallel Processing Layout of One Work Island



From an engineering point of view, AGVs and EMCs, particularly in parallel layout, provide more flexibility than does the traditional assembly line for a number of reasons. One is because cycle times do not have to be "balanced" on so rigorous a basis.[6] As a result production volumes can

6. Balancing the line means designing each task so that it takes almost precisely the same amount of time ("cycle time") to perform as every other job. Engineers are concerned that there be no line balancing losses, i.e., that no workers have "too little on the job" and stand around waiting for the next job. With AGVs in parallel layout, the cycle time can vary somewhat across spurs – to accommodate high (longer cycle time) vs. low option (shorter cycle time) jobs.

vary easily with major adjustments being made simply by closing down or opening spurs. Also, production can resemble batch production with vehicles being built to a relatively wide range of customer specifications (which is why it is used in commercial truck assembly plants in Sweden). Between work islands are buffer zones. Carriers are held here until they can be moved out in proper sequence to the next kitting stations for parts. These buffer zones mean that cycle times can vary somewhat between work islands with no line balancing loss.

Each spur usually has two workers (one island in the study had three workers per spur). In Plant X the carriers stop or "dock" at the workstations while the assigned work is done. The engineering advantages of this compared to other designs include the elimination of lost "value-added" from workers having to walk up and down the line, a better quality "build" because the job is stationary, and better ergonomics. Another major choice, as mentioned earlier, was to allow Plant X workers to release the carriers when their work was done satisfactorily. (In most installations in Sweden the carriers are programmed to move out of the workstation automatically.) This element of worker discretion, however, is combined with methods consistent with the more standardized TQM approach. A light on the carrier will flash when the time allotted by industrial engineering is nearly up, and will stay on until the carrier is released. This is to assist workers in keeping to the prescribed pace, and to alert the group leader or supervisor that there may be a problem. For similar reasons there are digital read-out boards (*andons*) at the end of most sections to indicate how many units under or over target the group is. Finally, there is a computer monitoring capability which shows supervisors the times of all carriers through each spur.

With respect to work organization, management did not exercise its prerogative when the union shop committee expressed strong resistance to work teams. In return, the union did not resist a number of other NUMMI-style changes. One, "self-inspection and repair", required workers to be responsible for their own work with the result that most inspector and repairmen positions could be and were eliminated. There are now only two job classifications for assembly work in Plant X, making job rotation possible in theory, although it has not been implemented formally. The seniority principle was relaxed for the initial recall of workers to assist in the set-up of the new technology in return for management's commitment to seniority for all subsequent job assignments. Other management initiatives focussed on communicating directly with workers: a massive training effort for the workforce before returning to the plant; a daily plant newsletter; and periodic group "up-date meetings" during regular working hours (perhaps intended as a precursor to group problem-solving).

The workforce, both hourly and salaried, is drawn from urban and rural areas within an hour's or more drive from the plant, and it remains predominantly male Caucasian with some women and minorities. It is also aging despite provisions for early retirement for both salaried employees and hourly workers. Workers are represented by the Canadian Auto Workers Union (CAW). Front line supervisors, the union and workers all expressed satisfaction with the levels of productivity and quality in the plant before the changes, despite high absenteeism and a fairly militant union shop committee.

The appropriate method for studying workplace dynamics is in-depth observation. In this case I did not need to use covert participant observation (Graham 1995) as I was given extraordinary access to Plant X. In fact, the research involved two assembly plants. The other plant still had drag chain technology at the time, thus serving as a research "control." Both management and the union shop committee agreed that I would divide my time between the two plants during a 12-month period in 1987–8: full-time for six months and one or two days per week for another six months. It is important to note that I began my research about six months after the plant reopened, just as production was starting to increase significantly (in contrast to Graham [1995: 15] who ended her participant observation at about this point).

Direct observation afforded me considerable flexibility. I could observe and chat with workgroups (four were selected in consultation), indeed work with them in some cases, attend some group meetings, and take up to 10 workers per group off the line for in-depth interviews which ranged from 30–50 minutes. I also interviewed front-line supervisors, general supervisors, the area superintendent, plant human resources and general managers, and union representatives. All interviews were open-ended and followed a similar format. Has your job changed as result of any of the changes? What are the most important issues for you in the new work setting? What do you think the future prospects are for your plant and company? I was interested not just in the daily dynamics, but also in the "legitimations" given by the participants for their actions. These are valuable in their own right and may also contribute to an appropriate interpretation of particular actions. What may appear to be cooperation, e.g., speeding up production, may actually be a form of worker resistance to management rationality (Edwards and Scullion 1982). I also had access to some documentation on production and the incidence of discipline and grievances. Lastly, it is important to note that I conducted follow-up interviews with key management and union informants in 1994 to ascertain whether there had been any important changes in either the work system or workplace relations.

RENEGOTIATING WORK

For purposes of exposition, the story of workplace relations in the new work system can be divided into three phases. The first I will call "the honeymoon." Prospects for buy-in seemed promising since workers almost universally appreciated the improved working conditions and management's stated concern for quality. But, production of the new vehicle started to fall behind schedule for a variety of reasons while consumer demand was very high. Not surprisingly, the shortfall was viewed very seriously by management, resulting in a domino effect of pressure for production from Head Office in Detroit to the workers on the line and a "downward spiral" of relations ensued. A year after the plant reopened, several participants called the shopfloor a war zone. During the third phase, "back from the brink," pressure from both sides continued, but it was not as acute as in phase two. After another six months, a compromise had evolved: productivity and quality were higher than before the change, but within parameters that reestablished some, albeit limited, "space" for workers.

Thus, the key substantive questions to be addressed are: Why did workers' initial consent to the changes turn to spates of resistance and what forms did the resistance take? Why did management revert to traditional forms of labour control? How did the parties reach their compromise?

The Honeymoon

Everyone appreciated how clean, quiet and bright the new plant was compared to a traditional assembly plant. And everyone liked working on a stationary vehicle and not having "to chase the line." Commitment to work was evident in comments supporting quality improvements and in the fact that most workers read and valued the daily newsletter. One worker commented that he particularly liked to know the daily production and quality figures because, "they represent my job future."

Less positively, there was some resentment of the compulsory training sessions because they had little to do with the new technology and jobs. Instead the focus had been on "teamwork" and problem-solving in quite abstract ways, so workers called it "brainwashing school." Workers also noted that the skills required were not much different from those in the old plant. There were a lot of bugs in the technology, including AGVs moving erratically and unexpectedly, and there were occasional reports of AGVs being sabotaged in response. As the bugs were dealt with, production was becoming continuous and at about the same level as in the old plant (40–45 vehicles/hour). Workers punctuated this steady pace with games of holding jobs and speed-ups. The decision to give workers control over carrier movement out of workstations created the opportunity for these games.

The game of holding jobs worked as follows. A worker, usually the same one in a group, would begin to hold jobs in his spur until he could be assured of a low option job – short cycle time – moving from the buffer into his workstation. For the initiator, not only did this game have the practical advantage of a slower pace and easier work, it also meant that he was outsmarting both his group mates and the supervisor. The teams which ended up with more high option jobs felt that there was an unfair distribution of workload, so they would also begin holding jobs, commenting, "why should we carry him?" Peer pressure – already a factor which interested management – consisted only of bantering among the workers involved in the game. A continuous pace would be reestablished when the supervisor would come and watch the workers, at least until he went back to his office. The game would depress the production count and periodically some groups would begin to speed up their work in order to eliminate the deficit. In this early phase some groups even gave a cheer when the readout board indicated that production had reached or exceeded the target. It should be noted that all workers in the island had to work quickly in order to clear the upstream buffer, thereby increasing the pace. That is, even the worker who instigated the game of holding jobs had to be involved in the game of speed-up.

At this stage there was no conclusive evidence that holding jobs signified clear resistance or that speeding up signified consent to managerial control. Rather they seemed to be primarily about the novelty of having control over carrier movement, and about some workers wanting to cause trouble. The significance of the pattern of holding jobs lies in its potential for lateral conflict among workers over the issue of fair workloads, a potential which was realized in the next phase. Speed-ups are the more interesting response to the new system at this point.

It can be argued, as Burawoy (1979) certainly would, that whenever workers release carriers within the time allowed by the industrial engineers, they are reproducing consent to the new system in particular and to capitalism in general. There are several factors mitigating this interpretation, however. First, Burawoy's concept of hegemonic control depends on not simply extracting surplus value from workers, but also obscuring the process. This was not working well in Plant X, at least for many workers. One said, "They've got everybody working harder. Whoever dreamed up [this system] is making the company lots more money." Another worker's comments reflected a contradictory awareness: "This [system] is better for the company as long as they can brainwash us to keep working harder."

Secondly, the speed-ups at this phase were partly about workers being able to develop "traction" – the feeling of being pulled along by the work – and building up speed during the start-up phase is essential to this

(Baldamus 1961). Thirdly, speed-ups can actually reflect worker control and resistance. Simply varying the workpace thwarts management's goal of continuous throughput, regardless of the technology. Also, workers want to get "ass time" – seconds here and there for reading, a cigarette or coffee. This is achieved with the drag chain by "working up the line," but with the new technology this is not possible. Workers realized that, through coordinated speed-up, they could jam the downstream buffers with carriers, thus getting a break until the buffers were cleared. With more coordination, they could create a wave effect of speed-up and breaks through the plant. For a number of reasons, collective action to produce the wave never really developed. Nevertheless, the key point is that the intent of the speed-up was resistance, not consent, to management's rationality of production.

In sum, after about eight months in the new plant the honeymoon was over, but overt resistance was very limited and individualistic. There was some peer pressure both to mobilize against the increasing pace of work and to "do your fair share." Burawoy's assertion that games of speed-up generate consent is too simplistic, but his point that they can create lateral conflict among workers has some validity. Differences among workers became more and more contentious as the pace of production steadily increased.

Downward Spiral

The lateral conflict was gradually overshadowed during phase two by vertical conflict over what should constitute a fair day's work in the new system and the fairness of management's campaign "to guarantee pace." In short, negotiating norms of fairness in the new system were at the heart of social relations both among workers and between workers and management. The technology provided both motive and a weapon for workers in the emerging "war." It even created dissension among managers.

A team from the advanced engineering group arrived from Detroit to determine the cause of the lower than expected production rate. Interestingly, their conclusion was that it was a people problem, not a technological problem. One member of the team told me that the new technology "requires motivated workers, and they aren't motivated." Some of the supervisory staff expressed faith in the ability of workers to deliver the numbers if only there would be one or two weeks free of technical problems. The dominant faction apparently sided with the engineers. Then there was disagreement over the specific approach to be taken: motivational or "kick ass."

Some supervisors did try to take a motivational approach using the computer print-outs, but with limited results as one explained:

> There is a real problem with variance between spurs. What are you as a manager supposed to do? You have one spur that does really good work, but they hold the job to do repairs. So, you go over and ask why they're holding the job. Well, it's to make a repair. You tell them, 'You're behind in your count'. The result is they say, 'Why the hell should we bother? We're the best workers he's got and he's not over talking to those slackers on the other spur. We are not going to put out the effort to carry them'. And they're right. You show them the paper with the numbers on it, and they can't argue with them, whatever they mean. So that paper comes between you and the workers all the time.

Another approach discussed was to set a daily or even hourly quota for each spur to even out the work and allow for variable pace across spurs. In fact, some workers and supervisors noted that the system would be conducive to a piece-work payment system. Management rejected a quota because they said a steady pace was needed to ensure quality. Piece-work would be completely unacceptable to the union. Senior management rejected the technical fix of reprogramming the carriers to move out of the work stations automatically after the allotted time, still maintaining the importance of worker buy-in.

As production increased, the more inequitable the workloads became, and the angrier the workers became, especially those who were conscientious. The following quote is a typical reaction:

> My partner is always complaining, so finally I said that we would just slow down to the pace of the slowest guy. Neither of us want to work slow, but we've decided to. We've told the foreman too. Four of us – my partner and I and the next spur over have kept all the print-outs [showing differences in work done across spurs] ... From the company's point of view, they don't care who does how much just as long as they get the numbers.

This seemed to be true since the obvious solution to most workers – using the print-outs to discipline those who were the worst offenders at holding jobs – was not really tried. No definitive reason for this omission was apparent. One group leader suggested that, "Supervisors never want to deal with the ass holes." Instead, production managers increasingly adopted a hard line with the workforce as a whole: increasing supervisory visibility on the shopfloor; haranguing workers about production in the plant newsletter; and launching a discipline campaign against early exit and absenteeism. These actions are clearly not consistent with the problem-solving, cooperative approach of the new work systems. But when production did increase, proponents of the hard line felt vindicated. If managers hoped to subject "slackers" to peer pressure by this tactic, then they had limited success because many workers shifted their anger from the slackers to management.

The case of a subassembly area illustrates the evolving lateral and vertical social relations. A time standards dispute had been brewing for

some time. What would have been a purely vertical conflict with drag chain technology was also, in the context of a parallel layout, a lateral conflict. There were seven workers all doing the same job and naturally there was considerable diversity among them in dexterity, endurance and attitudes to work. Without a consensus among the workers regarding a fair workload, it was easy for industrial engineering to maintain that the time allowed was sufficient for the tasks prescribed.[7] There was no agreement among the supervisory staff on the need for change, so nothing was done. The issue came to a head at a group meeting held over lunch with coffee and doughnuts provided to encourage attendance.

The meeting began, as usual, with the group leader showing some slides on the group's production counts, audits and unrepaired items. Discussion ignored these figures, focussed briefly on some interpersonal problems regarding emergency relief, and then turned to the time standards dispute. The supervisor now spoke to say that the purpose of these meetings was not to get into "all of this stuff." Some workers stated that they thought these meetings *were* intended to get concerns aired and to find solutions. The supervisor explained that he wanted the job changed, but industrial engineering insisted that there was enough time allowed on the job. Things were getting very heated and one of the workers involved said, "Yes, you can get your count, but not without working us into the ground. These were supposed to be preferred jobs, and I haven't worked so hard in 20 years." Another worker told the foreman, "I'll dig for you, but there has to be a limit." Everyone agreed that the pace was killing in comparison with the drag chain, especially since the harder one worked, the faster the jobs came. When there were comments about some workers not doing their share, the union rep, who happened to be attending, asked for five minutes with the group and management left. He reminded the group that workers should not criticize each other, especially in front of management. A worker replied, "Right, but meanwhile we're letting management stick it to us and not standing up to them." Everyone then went back to work.

Concurrently, items from production managers were placed in the newsletter and changed from exhorting workers to threatening them. The following is an excerpt from the most threatening in a series.

> The truth of the matter is the Corporation is becoming extremely impatient with us... I personally believe, from meetings [with division executives], that unless we substantially increase our output, within the next month, a decision will be made to seek an alternative producer, to produce some of the products we

7. How to conduct time study remains an issue in the plants. The union wants the traditional method of an observed timing, as called for in the collective agreement, where the workers can work at a relatively slow pace. Management has insisted on using accumulated computer print-outs which will inevitably show that the time standard can be met.

> currently build in our plant. Work is currently going on to put this in place... Yes, we have problems that must be fixed, but if everybody did their best when the equipment was running, there would be less blame placed on *equipment* as the culprit. This place pays well enough — hourly and salaried — that everyone should be putting in *extra* effort to save their job right now. ... It would be a shame for so many good people in this plant to be dragged into a position where they're *impacted* by a few who don't care. Mark it well, there will be no sympathy or support from me personally for those who don't work, or, who impede the plant's survival. On the other hand, if there is anything that I can humanly do to help you, to help this plant, you can count on me.

Many high-seniority workers told me they were simply resigned to such language, while many younger workers were clearly worried about their job security. Some may have increased their efforts, but others reacted in the opposite way. For example, one normally quiet, conscientious worker with just seven years of seniority was fuming:

> I've got a pretty good attitude to the company, but that letter yesterday really put me off. If they have that attitude, then I'll go back to the old attitude too. All that crap about the place being closed down! Eventually the guy who is putting out won't care. If they have a problem spur, then go after that, not everybody.

Interestingly, production reached the target level of 60 jobs per hour and the letters stopped. It is impossible to determine any causal links between the two events.

Workers had to weigh the threat of plant closure if production was not high enough against the intensification of work they were experiencing. There was the responsibility of self-inspection and repair, having to get along with others, and a growing awareness of the problem noted in the subassembly group meeting: the harder you worked, the more jobs came through your spur. There was neither an incentive to work hard in spurts nor an upper limit to production like on the assembly line. So, what was a fair day's work?

Attention to quality became part of the equation as motive and a weapon in work relations. Workers believed that management was compromising its commitment to quality in the name of quantity. Sometimes they would use quality — the need to make a repair — as a legitimization to slow down. Alternatively, if workers were criticized for trying to deal with a legitimate quality problem, resentment grew. For example, Gerry, one of the most conscientious, pro-company workers in the study took a serious problem to the manager who wrote the newsletter item. The manager did arrange a meeting to discuss the problem, but neither he nor any other senior production manager attended with the result that nothing other than buck-passing was accomplished. Gerry's attitude changed markedly after this event.

He said, "It's all politics [between managers], and it's turned me into just doing my job; I don't care about the rest."

Individual or group resentments turned to virtually plant-wide resentment when management began a discipline campaign against early exit. Over a number of years, many high-seniority workers in off-line jobs had been getting away with leaving work early, often several hours early. Accountants from Head Office had discovered this and apparently laid down the law to local management at all Autoplex plants to clean up the problem. Managers said that the timing of this requirement was merely "unfortunate," coinciding with the pressure for higher production. However, there is evidence that it was more than coincidence, that management used discipline as a "hammer" in the battle for control of production. Overall the incidence of discipline increased more than five-fold in this three-month period.

With respect to early exit, rather than focussing on the few key abusers, management again took a hard line with the whole workforce. First, they posted supervisors at exits and disciplined any workers caught leaving even a few minutes early. Then, they started to discipline workers for being out of their "work area" at any time, and progressively restricted the boundaries of what the work area was. Stories abounded of "good" workers with nothing on their records being suspended. Although most workers felt that management was justified in disciplining those who clearly abused the rules, anger mounted at being treated like "kindergarten kids." Resentment was further fuelled by the perception that managers were playing games with the discipline:

> I don't think he [the foreman] has ever given discipline to one of us for leaving early. He's not likely to because they could cause problems for him. But another foreman will, so he will retaliate against someone in that foreman's group.

Some supervisors confirmed this frenzy of discipline and one also alluded to the problems it was causing him:

> The labour relations here is like a war zone. It's from the 30s or 50s. They [managers] sit around talking about how much discipline they've given out, who they were able to get this time, and so on. I don't know where it comes from. The union does have a reputation for being, well, more radical, but I just don't know. I can't operate like that. Besides you can't expect cooperation and a quality approach like that. ... You know, I don't think they know what to do with the new technology. It may be to promote teamwork, but it is being perceived as a "kick ass" system.

While senior management justified the discipline campaign on the grounds of efficiency and Head Office directive, workers justified further indiscipline and/or withdrawal of cooperation on the grounds of "what goes around, comes around." The union responded with a flood of grievances and then

refused to participate in the grievance handling process. For many workers this only served to confirm the union's lack of power.

Theorists as divergent as Gersuny (1973) and Burawoy (1979) argue that coercive strategies are less effective than other means of control and are generally only used as a last resort, so it is difficult to understand why management adopted them. In *Wildcat Strike* (1954: 89), Gouldner states that a key cause of the strike was management's "bullying behaviour," not the technological change which preceded it and it was linked to managers' "status interests":

> They were, therefore, disposed to resist any solution which threatened their prerogatives and diminished their control over the situation, however much it might improve efficiency. *Given management's fear that workers were out to control the plant, management sought solutions which were safe as well as efficient.* (emphasis added)

There is considerable evidence that such status interests did underlie the change in strategy by production management in Plant X. One, admittedly extreme example of managerial attitudes was a general supervisor who told me, "I tried that [the cooperative approach] for a while — being the shithouse — and it doesn't work. As soon as I went back to stricter measures, things settled down." Furthermore, their reward system was geared to throughput and their superiors' evaluations, not to the development of cooperative relations. Finally, GM was beginning a program to reduce managerial ranks substantially which was creating insecurity. Thus, in the absence of an appropriate training and reward program, the managers who set the tone preferred the known risks — and benefits — of a kick-ass approach to the unknown dynamics of a motivational approach.

By the first anniversary of the system, its early promise had been almost entirely eroded. Many workers felt that management had broken its promises about quality. Worker control was turning out to be a sham and the work was intensified. If you held jobs, you could be disciplined; if you worked hard, all you got was more jobs. The "indulgency pattern" of shopfloor life in the old plant had been shattered (Gouldner 1954). Consent became grudging compliance. Conflict, both lateral and vertical, was widespread but still largely individualistic and subterranean. However, sit-downs and wildcats were part of the Plant X tradition.

Back from the Brink

Surprisingly, the overall situation in Plant X seemed to settle down after a holiday break with cases of discipline declining and production increasing. Over the next six months, production stabilized around the target level of 60 jobs/hour. Management even had some success in stimulating competition for production records across groups and between shifts, but vertical conflicts

remained. In the subassembly group, the old supervisor, who was generally respected by the workers, was replaced with a young, recently graduated engineer who caused great turmoil. The contentious job had been modified, but several of the senior workers in the group preferred to exercise exit rather than voice and found better jobs (lower obligations to work and obey) in other groups. One of the workers with average seniority, about 14 years, told me:

> I'm really fed up and I would take the old system any day. *With this system, you don't have to chase the job, the job chases you* (emphasis added).... There's no way you can take a break. And we can't get the buffer filled up. We just can't run like this all the time, especially the older workers.

However, the most notable event in this period began with another time standards dispute in a group adjacent to the study area.[8]

From the workers' point of view, the issue was not the timing of the job itself – even the union admitted that the time was loose – but rather, yet another broken promise from management. Production management had not been disciplining workers for taking a break if the downstream buffer was full, in effect condoning an informal quota and providing an incentive for working hard. With some coordination among workers, and given the relatively loose time on the jobs in this area (compared to the other subassembly group), workers could quite easily fill the buffer. Management therefore decided to do a time study with the result that one spur out of five (two jobs) would be eliminated. The group reacted with slowdowns and even some sit-downs. Finally the top union committeemen became involved and one told me:

> To win, all it takes is the district committeeman and me to get out there and talk to people. Tell them the facts about the count, and once they realize, it's easy to coordinate a slowdown. We're starting to realize what control we have. We had supervised times and some were really exaggerated, but if everyone is working consistently, what can management do? Fire everybody?

Management backed off; the two "surplus" workers and the *de facto* quota remained. But, the union was unwilling or unable to go beyond this group to mobilize "control" plant-wide. Nevertheless, the action in this subgroup did contribute to giving workers a bit of space through acceptance of the informal quota system. This proved to be a double-edged sword, however, because the quotas helped legitimize management's use of discipline for restriction of output, which began to increase using the computer print-outs as proof.

8. I did not directly observe these incidents, but I questioned several participants about them.

Epilogue

The follow-up interviews with key management and union participants in 1994 revealed that there had been no work stoppages or other major forms of resistance in the intervening years. Formal teams have still not been introduced. Product demand remains very strong and a third shift has been added. Workers for this third shift were transferred from a nearby plant which was closed and their productivity is high, demonstrating the effects of a "significant emotional event." Management has rationalized production, giving up the flexible use of technology to produce a wide range of model variations, focussing instead on one basic model, which means that scheduling and inventory are simpler to manage. It also means that cycle time variation and, consequently, inequitable workloads across spurs have been greatly reduced. The reduction in variety combined with overtime have increased the stress on workers, especially repetitive strain injury. While this is a concern to the union, an even bigger issue is GM's apparent determination to reduce the workforce through continuous improvement — *kaizen* — and, more importantly, through outsourcing.

It is relatively straightforward to review the situation for workers at Plant X who had both motives and methods for resistance. Their motives revolved around issues of fairness: workload, broken promises and discipline. Methods included the technology, mainly their control over carrier movement, and quality. They would variously slow down or speed up, ignore quality issues or attend to them diligently, as it suited their purpose. While there was some overt conflict in the form of sabotage and sit-downs, the question is why there was not more of it, given the strong market for the vehicle and the relatively militant tradition of the workforce. The answer to why management reverted to form and used coercive measures, despite its avowed commitment to the new model, is also not so readily apparent. Simply put, there may have been no compelling reason, in the short term, not "to get product out the door" the best way they knew how. Ultimately management and labour negotiated a new effort bargain and indulgency pattern in the workplace. This outcome reflects, I submit, the contradiction between control and consent (Edwards 1986) and the dualism noted by Cressey and MacInnes (1980).

ANALYSIS

Technological determinism, labour process theory and strategic choice, while each contributing to the analysis, are insufficient to explain many aspects of the social relations in Plant X. The new technology did have some independent effects in heightening lateral and vertical conflict by changing the pace of work and creating *de facto* groups: "having to get

along." Contrary to technological determinism and the implicit beliefs of Plant X management, it did not result in a new era of fulfilling work and consensual workplace relations. Managerial control was certainly central to what occurred, but was far more contradictory in its forms and outcomes than depicted in the basic labour process analysis. Better strategic planning and implementation would have undoubtedly helped, for example reducing conflict within management on the appropriate approach, namely, responsible autonomy. In fact, a few participants, management and labour, summed up the problem as, "the technology of the nineties matched with the social system of the fifties." On paper the combination of the AGV technology and NUMMI work organization looked like a promising new approach. The point is, of course, that new systems do not come with clear directions, and even where there is an integrated strategic plan, there are many sources of slippage or "organizational drift" (Robertson et al. 1992).

One key source of uncertainty and tension is resistance from the union. The union in Plant X retained considerable bargaining power, effectively resisting teams for example, and it can be argued that their presence did ultimately put limits on management's push for control on the shopfloor. Elsewhere Starkey and McKinlay (1993) state that union resistance forced Ford U.K.'s management to adopt an opportunistic approach to restructuring production. Opportunism can also be stimulated by the competitive position of the firm, weakening management's commitment to consensual relations, especially in a nonunion firm (Geary 1993; Graham 1995). Interestingly, in the case of Plant X, the competition — real or manufactured — came from another plant within GM. A third source of slippage or opportunism comes from the status interests and values of managers and supervisors, either as a group or as individuals (Gouldner 1954). Some examples from a study of NUMMI (Wilms, Hardcastle and Zell 1994) show that managers can revert to coercive tactics even in the best environments. Thus, problems of implementation are an inevitable, but not sufficient explanation for contradictory workplace relations.

The analysis proposed here, the "negotiation of order" perspective, is also used in a number of British studies on TQM-type systems.[9] These and other studies of the impact of new work systems on workers highlight "disenchantment" with the system. In Plant X this is reflected in workers' frustration with broken promises and the perceived lack of fairness of the new work system; hence the limited buy-in. What explains this widespread

9. Starkey and McKinlay (1993) on Ford U.K.; Delbridge (1995) on a Japanese consumer electronics plant; and Geary (1993) on two American electronics plants in the Republic of Ireland.

disenchantment? The argument is that relations at Plant X suggest ways in which attempts to change the negotiated order under the new work systems can actually heighten the contradiction between control and consent in comparison with Fordism.

Under Fordism, consent is construed as "pragmatic acceptance." Workers accept the rigours of assembly work and the duty to obey in return for money, preferably with a union to protect their interests: "a fair day's work for a fair day's pay." They are "bought off" with higher wages to compensate for things like intensification of work. Management does not want worker involvement and the assumption is that workers are equally uninterested. Under the post-Fordist model, at least the North American variant as described in the managerialist literature, consent is construed as "commitment" (for example, Walton 1985). Involvement is seen as both a necessity for management and an intrinsic reward for workers. To make workers "buy-in," management promotes the idea of a unity of interests at the general level through cultural control — "serve the customer," for example — and at the detailed level by implicating workers in off-line production decisions so that they will exert self-discipline on-line.

The heightening of the contradiction between control and consent has both material and subjective elements. For example, the AGV technology, especially with worker control of carrier movement, is the ideal technology for attempting buy-in. The potential is completely contradicted, however, by a continuation of the Fordist rationality of controlling production manifested in three ways. One is the emphasis on continuous throughput with the buffer zones used primarily for scheduling of parts, not for enabling true self-pacing. Another is the rationalization of jobs using traditional time study methods, although using the best workers as the standard rather than the slowest or average workers. Both of these are enhanced by the use of computer monitoring in a more coercive way than motivational way. A similar tension exists in the way managers in TQM plants respond when workers pull the cords to halt the line (for example, Rinehart, Huxley and Robertson 1994).

Turning to the subjective element of the contradiction, while motivation has long been a concern for managers under Fordism, the intensity and sophistication of management's focus on the psychological contract with workers is new (Graham 1995; Rousseau 1996). Management portrays commitment almost as a moral obligation for workers, that is, as an end in itself. The problem for management is that, in making moral claims on workers for commitment, they set themselves up for workers making moral claims on them. When, as in the case of Plant X, they slip opportunistically into breaking promises and tying rewards and punishment explicitly to performance, they re-create what they were supposedly trying to overcome: a

purely economic exchange. Even the term "buy-in" used in the sense of commitment reflects the tension between the economic contract and winning hearts and minds. There is little evidence in either Plant X or other studies that the psychological contract has been significantly altered in the sense of an unquestioning commitment to management demands. Meanwhile, the dualism of the relationship contributed to both sides backing down from further conflict.

CONCLUSIONS

This paper supports the conclusion that the transition from Fordist workplace social relations is halting and uncertain (Geary 1995; Wood 1995). At least for the present, there is no "one best way" of reorganizing production to create fulfilling work and labour-management cooperation. In fact, experiments with hybrid work systems such as that of Plant X show that new work systems can contribute to the very tensions that they were intended to overcome. Giving workers *apparent* control over carrier movement was intended to elicit consent, but elicited more conflict than cooperation when workers became disenchanted with the *actual*, very limited control they had. Klein (1991) has noted that workers' resentment is particularly high when they have experienced some autonomy under group working followed by managerial rationalization of work along TQM lines, thus decreasing workers' on-line autonomy. In other words, the more management stimulates the productionist interests of workers in an attempt to achieve consent, the greater the risks to that consent of subsequent management efforts to control production solely according to their logic.

There are two possible implications of the fragile consent to new work systems. One is that consent is not as crucial to competitiveness as many of the proponents of new work systems claim. After all, productivity seems to be increasing in auto plants despite the widespread disenchantment noted in the literature, and so it will be business as usual. Alternatively, labour may mobilize either to resist the new work systems or to push for real worker control, the "domino effect" of worker involvement (Hunnius 1979; Terry 1989). In spite of recurrent instability on the shopfloor, there is little basis, material or subjective, for such labour initiatives. There are at least three key reasons for this.

First and foremost is the continuing global competition both between and within the major auto manufacturers combined with weak labour markets. In January 1995, 15000 people lined up for applications to work at General Motors in Oshawa. No one has been hired and the current round of collective bargaining focuses on protecting the jobs that are there from out-sourcing. The dual nature of labour's relationship with management means

that they may not be more committed, but they are certainly more dependent on management than they have been. Secondly, unions are also faced with new tensions created by the new work systems. Their members do prefer some aspects of the new systems to Fordism and obviously give credit to management for these while blaming the unions for failing to protect them from the negative aspects of the changes. In Plant X, for example, most committeemen were unwilling or unable to negotiate the effort bargain and manage the peer pressure created by the new system. Moreover, the union at Autoplex is notoriously factious, further weakening its legitimacy and ability to mobilize. Thirdly, Jurgens (1993) points to national affiliation of auto companies as an important factor in the trajectory of change. The situation in Canada in general, and GM Canada in particular, is roughly the same as that in Britain. That is, traditional strategies for rationalization are favoured while group work is blocked by the unions. This is in contrast to the U.S. where change tends to be favoured by both management and top union leaders — Saturn being a notable example (Rubenstein, Bennett and Kochan 1994) — and to Germany where the existing dual structures of industrial relations support work system change.

Therefore, it must be concluded that the promise of the hybrid work system in Plant X for fulfilling work and consensual social relations remains just that, a promise. Whether the AGV technology will be used to further human-centred production or lean production depends heavily on factors away from the workplace as demonstrated by the experience at both Plant X and Uddevalla. Ultimately, however, the contradictions created by any work system must be negotiated at the local level. The current situation at both micro and macro levels does not presage a significant break from Fordist relations of production.

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RÉSUMÉ

Transformation du travail et rapports sociaux dans une usine canadienne de General Motors

Cet article présente quelques conclusions tirées d'une étude ethnographique portant sur les relations sociales dans une entreprise

d'assemblage de véhicules où la chaîne traditionnelle fut remplacée par une technologie suédoise automatisée et où quelques aspects de l'organisation japonaise du travail furent implantés. Cette usine de General Motors à Oshawa (Ontario) est intéressante en ce que non seulement y trouve-t-on une approche hybride de deux modèles de travail mais en plus y retrouve-t-on une main-d'œuvre qui était en grande partie la même avant et après ces changements. Le syndicat des Travailleurs canadiens de l'automobile (TCA) regroupent ces employés et le comité d'atelier a traditionnellement eu une réputation de militantisme relatif. Nos conclusions remettent en question l'idée que le fordisme est en train d'être supplanté par un nouveau modèle de production résultant dans un travail plus satisfaisant et dans des relations sociales plus coopératives.

Résumons de la façon suivante les relations en milieu de travail durant les premiers dix-huit mois d'opération. Les travailleurs ont apprécié de façon presque unanime d'une part le nouvel environnement de travail amélioré par la technologie et, d'autre part l'engagement de la direction envers la qualité. Une promesse de départ s'est cependant vite dissipée vu l'intensification du travail sous le nouveau système et suite au recours par la direction à des tactiques traditionnelles pour assurer la production. En est résultée une période de relations hautement contradictoires entre négociations, discipline et efforts pour atteindre et même dépasser les objectifs de production. Cette tourmente fut suivie par un accommodement stabilisant les relations, maintenant caractérisées par une acceptation pragmatique du fordisme plutôt que par l'engagement prévu par les tenants des modèles post-fordistes.

L'analyse de ces dynamiques d'atelier démontre que même si plusieurs perspectives théoriques apportent certains éléments pertinents, aucune n'explique la complexité des rapports sociaux de travail. La nouvelle technologie a eu des effets indépendants sur l'expérience de travail, positifs et négatifs, mais n'a pas déterminé pas les relations de travail. Tant le modèle de choix stratégique que la théorie sur le procès de travail n'ont pu expliquer pourquoi la direction a eu recours à des tactiques coercitives inspirées d'éléments motivationnels du nouveau système de travail. Les problèmes d'implantation sont certes inévitables, mais ils ne constituent aucunement une explication suffisante.

Notre propre explication emprunte de l'approche axée sur la production du consentement (Edwards 1986 ; Bélanger, Edwards and Haiven 1994). Plus spécifiquement, il y a contradiction entre contrôle et consentement : la présence accrue de contrôle, surtout de type coercitif va entraîner la résistance des travailleurs. Cependant, un contrôle moindre ou insuffisant peut résulter en une productivité et une qualité en deçà des normes acceptables. Le résultat en est que la négociation, le conflit et la coopération sont au cœur

même du travail et n'apparaissent aucunement comme un accident de parcours. Il faut donc que cette contradiction soit amenuisée ou éliminée pour que l'engagement et des relations consensuelles prédominent.

Nos résultats, suite à l'études de cette usine et de d'autres lieux de travail, suggèrent plutôt que la contradiction entre contrôle et consentement a été exagérée au sujet des systèmes fordistes. Un thème commun est cependant celui de la désillusion des travailleurs face à ces nouveaux systèmes de travail suite aux différences entre les promesses et les résultats vécus. Nous explorons les aspects matérialistes et subjectifs des tensions ainsi créées. Plus la gérance stimule les intérêts de production des travailleurs afin d'atteindre le consentement, plus il y a de risques qu'il y ait efforts subséquents de la gérance de contrôler la production seulement selon sa propre logique. Il faut donc conclure que la situation actuelle, tant au niveau macro que micro, ne présage aucunement un abandon significatif des relations fordistes de production.