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Philippe Bernoux, Jean Ruffier

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SEMIAUTONOMOUS PRODUCTION GROUPS

Philippe Bernoux and Jean Ruffier (France)

This article relates the experience of autonomous groups in France. The changes took place in an experimental way, in a situation where the factory had become "unmanageable." What are the consequences of this change? The attitude of the workers toward their work has become less automatic. On the other hand, their perception of being exploited has remained the same.

Semiautonomous groups provoke sharp reactions in France, despite their near absence in the country. This technique, which consists of letting workers organize their work themselves, is the object of numerous polemics with employers as much as with unions. The first are afraid to see the dissolution of the principle of hierarchical authority, which is a basic condition of plant operations. The unions, on the other hand, fear that these new methods, giving the worker the illusion of autonomy, will

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Bernoux (INSA) and Ruffier (CRESST) are associated with the Lyon Group of Industrial Sociology. This article reports part of the work done under the auspices of this group, with the collaboration of Michel Jacob.

only integrate him more deeply into the firm and so thrust on him a greater work load — superexploitation through psychological conditioning. Confirmation or denial of these fears can be tested only by an analysis of a project of some consequence, but we must already keep in mind that these two divergent views spring from the same myth. This myth is the belief in a Machiavellian actor who alone decides work engineering on the basis of his personal goals. On the one hand, the person responsible for change is an enemy infiltrated into the management of some plants; and on the other, he is a boss with an "exploitative" mentality greater than that of his colleagues.

Reducing evolution to the feat of one person keeps one from seeing its social and economic causes. It then seems necessary to understand those causes to see if the emergence here and there of autonomous groups will remain purely chance or if it foretells a radical change that will upset the business world.

This article will use the first results of what has until now been France's largest experiment in semiautonomous groups on the basis of the number of workers involved. (1) This inquiry has several phases, of which three will be considered here: the background or the research into the causes of this innovation, specific observations on the differences between the new organization and the old one, and the results of a questionnaire on attitudes.

I. The Unmanageable Plant

While this article concentrates on the descriptive part of the study, it seems appropriate to say a word about what led to the changes.

Benefiting from a privileged position on the local labor market, the plant had adopted very strict criteria for selecting employees. Workers with a relatively high cultural level were hired. Often their occupational qualifications were out of keeping with the work to be done. Actually, 30 percent of the workers in the production department held a C.A.P. (Certificate of Professional Aptitude) outside of the trade concerned. And it

was exceptional if apprenticeship on the job lasted more than two weeks. The work methods in use reduced the operators to doing jobs essentially physical, unchanging, and repetitive in an environment that was extremely noisy and, therefore, tiring. The complaints about work conditions were somewhat blurred at the beginning by the high salaries for the area and by the fact that they increased progressively with age, but the difference between the pay scale of the plant and of other plants in the area began to narrow.

Having realized substantial profits during a period of near monopoly, the plant found itself abruptly faced with keen competition because of a change in customs barriers and because of circumstances peculiar to the market. Management then launched an effort to increase productivity. To this end shop management underwent substantial changes, leading to reducing to the minimum the margin of initiatives by operators. Moreover, the management hardened its position in regard to salaries and even decreed some cutting of bonuses. The plant then had two years of open labor strife with two successive long-term occupations. A change in management brought a relaxation in relations with the unions, but the situation in the shops remained tense. The plant, it was said, was "unmanageable." Tension between workers and foremen assumed such proportions that some foremen could communicate with workers only by written instructions or gestures. Moreover, production fell off because of the very rigidity of the management (which we shall speak of later) and also thanks to some obvious slowdowns.

Conditions were ripe for change. These included a strong claim in favor of the autonomy of the workers, which is spelled out in the phrase "We are not robots"; helpless shop bosses; and shops that were working badly. Moreover, an economic situation developed that was good for the short term but uncertain for a longer term. As a matter of fact, accumulated reserves had helped the plant withstand the first shock of competition. A period of increased consumption brought a momentary respite, but the difficulty in retaining the production level of the years before the crisis, with the competition leading a

ferocious price war, brought the cry "we cannot continue like this."

We can suppose that if the plant had not had a breathing spell, it would not have launched into the innovation of semiautonomy but would have sought to raise productivity by traditional means, perhaps even by increased repression. Equally, the management could have contented itself with the situation, as bad as it was, if the consequences of this inaction had not been so catastrophic in the long run. However, if the reasons for change really were economic in nature, the direction that it took can be explained by other factors.

In this respect what happened is like what is happening at Volvo in Sweden and at Ford in the United States. It becomes apparent that a way of organizing work which was satisfactory can no longer be used because the workers reject it. In the three cases some common characteristics are found: an advanced technology, repetitive work requiring little or no skill, and a relatively educated and prosperous working population. Numerous indications suggest that the rejection of repetitive work by relatively well paid workers is becoming generalized. To avoid this rejection immigrant labor can be hired or the work changed. In the case studied it was not possible to dismiss the old workers without paying damages; therefore, the second solution was chosen.

II. The Old Organization

Most shops operate continuously. Work is very automated. Interaction with machines consists only of loading and unloading the trays, scrupulous cleaning of the parts through which the product passes, starting the machine, restarting in case it stops, changing used parts, repairing after breakdowns, and control of oil levels, speed, and temperature of some parts.

Aside from these operations on the machines, production requires choosing the trays according to quality. For the most part this selection is made after a very rapid visual check. It is made on the basis of the thickness of the product and its length when wound.

The machine cycle is about eight hours. During these eight hours, supervision is necessary from time to time to avoid a pause which could cause significant breakage. At the end of each cycle one must unload and load the machine, carry out a more or less thorough cleaning, and start the machine again. This operation takes about a half hour. During an indeterminate period after starting up, if there is a pause one can restart without too much effect on the length of time. The work requires no special ability, except a flick of the wrist to launch the product. This ability can be acquired in about two weeks. It demands good physical stamina because it is necessary to lift trays of from 15 to 50 pounds in a noisy, hot atmosphere. Added to that is the strain of continuous work.

The organization of work had adopted a very Taylorist model, breaking the job into a multitude of functions assigned to different individuals and putting in a process of manufacture that was extremely detailed and demanding.

The role of the foreman was to control to the maximum the workers' respect for the prescribed process. That is how, following the eruption of competition, the role of the crew chief was understood to be the shortest route to increasing quality and productivity by obliging workers to follow instructions more strictly. The weapon of these new foremen-agents was a worker's bonus, which could be cut down progressively each time a worker was caught red-handed ignoring prescribed methods (particularly during cleaning). This strengthening of controls on the operators led to an abrupt decline in the relations between workers and their supervisors without having a really conclusive effect on the productivity and quality.

Then someone conceived the idea of distributing the work by using the plant's computers to determine the best possible distribution of jobs but without taking into account the wishes of the operators. Each worker found himself at the beginning of his job with a sheet dictating to the last minute where he should be and the operation that he should be carrying out. Consistency in control was found to be easy since each crew chief had copies of the sheets. Stories still are often told about supervisors

who hid near a machine to be sure that the sheets were being followed.

The deterioration of relations between supervisors and workers became even more marked not only because the former's role in control had been reinforced in the first place but also because they had lost the role that justified their existence in the eyes of wage-earners — that of organizing work. The worker lost practically all autonomy. It was not possible for him to speed up nor to fall behind. Before beginning a shift he did not even know whether he would be granted his meal break in two hours or in six. Besides, there was always the feeling of being spied on and the fear of a possible cut in his bonus. A worker describes the situation as that of a man swimming under water. His head seems more and more ready to explode. Then he must come up for air. The shops underwent frequent sitdowns for the slightest reason — a sign of the rebellion against the harsh rules. While computerization seemed to be the best way to solve the problem of work distribution, its use led to greater tension in the shops, to the point that the increase in productivity was threatened.

Following the failure of the computerized orders, application of the theories of human relations by a new management was intended to relieve a catastrophic situation. The foremen were given retraining and urged to change their style of giving orders. But a repressive and policelike system was built into the very logic of this organization. Inasmuch as the computer dictated the operators' tiniest actions, the rationale for supervisors continued to be only to see that orders were followed and to penalize infractions. Since this role was exclusively negative, workers could only dislike it. Also, along with efforts to train foremen, the organization of the work itself was questioned, and this questioning, which continues, had already engendered semi-autonomous groups.

III. Semiautonomous Groups (SAG)

We will not talk here about the introduction of semiautono-

mous groups and the strategies of these groups in the face of change. We will content ourselves with the principles of the new organization through a picture of the present situation. The method for gathering facts is inspired by sociography: Different groups of workers under the old or the new organization were observed for the whole period of their jobs. Noting carefully the details of the tasks accomplished, the observer also asked the workers to explain the difference between what they were doing at that time and what they did before. In other words, the difference between working in semiautonomous groups and working in the traditional way of organization.

Theory ... and Practice

Since the work itself entails little true satisfaction, interest can only increase by the addition of meaningful tasks centering on organization and control. Moreover, because of its concern for economic effectiveness, the hierarchy wants to make the operator sensitive to the quantity and quality of production by making him aware of his own impact on production.

The solution adopted aims at giving a part of the shop to a group of workers with an assignment to make it work according to production plans established by the hierarchy. It was the idea of the job engineers that in one zone a group composed of four or five persons take over a set of prescribed jobs, including sweeping of the job area. This takeover also included assignments previously carried out by supervisors. Thus the plan would lead to doing away with the first level of command, that of the crew leaders. On the other hand, contact was to be made at the beginning of each shift with the preceding crew to receive instructions and to learn the state of the machines. The foremen kept as their duty the coordination of the groups in the shop and the communication of instructions from the hierarchy, along with the role of disciplinarian. They lost the role of work organization and supervising the implementation of procedures, but they gained the function of group leader [animateur de groupe], which allowed them to put into practice their re-

cent training in human relations.

Depending on the shop, the plant acknowledged two types of procedure for introducing semiautonomous groups. The first consisted of a fairly large consultation on the plans for new organization through numerous meetings, with many operators participating along with supervisory personnel, executive staff, and representatives of the departments of training and industrial engineering. Then all the shops changed over to the new method.

The second procedure was on a voluntary basis. When the boss of a shop could find four or five persons who agreed to work together according to the new method, he organized a meeting at which the new methods were presented and discussed. Then the group became semiautonomous, with a guarantee of the right to return to the old way at any time. In both cases the initial plan was modified in practice for reasons of technical arrangements or following negotiations with the workers involved. The consequence was a vagueness in the new definition of jobs, and the project was not applied exactly everywhere, although it is still used as a reference. A second and more original consequence was that of groups left free to transform their jobs, each modified the project in different ways. So work management ceased to be exactly the same for everyone.

We are going to analyze the situation in the shops, where the implementation of autonomy resulted from individual volunteering. While the trends present in the volunteer situation can be seen in all cases, they are particularly obvious here because of the possibility of individual choice. In these shops three organizations coexist to differing degrees: semiautonomous groups, nonautonomous groups, and groups with a definition of the job that combines the principles of both groups as a result of an agreement with the union. (2)

Semiautonomous Groups and Nonautonomous Groups

Whatever the method, the essential features of the work remain strictly the same, all the more so because for the shops being considered, the machines can be successively handled by

workers working according to different organizational plans. The degree of automation of the machines and the fact that in general one tray can be loaded and unloaded by two different crews forced a standardization of the operation for loading and unloading, for handling breakages, and for stamping products. Now, these operations make up the major part of production work. They are common to all operators, just as are the jobs of cleaning the parts in contact with the product and those of controlling and classifying outgoing trays. Only the timing of these tasks, like the quality of their fulfillment, can vary. This common core for all job engineering rests on the traditional work of the operator. Concretely, the difference between the types of organization rests to a larger or smaller degree on their encroaching on areas formerly reserved for foremen and other workers (hand labor, maintenance workers, weighing machine operators, and inspectors).

These encroachments are classified by three descriptions of different jobs: autonomy (the semiautonomous groups), nonautonomous groups, and negotiated organization. The followup on several groups has confirmed the thought that one cannot trust theoretical descriptions established to justify differences in classification rather than to reflect faithfully the jobs effectively accomplished. The autonomous workers did not carry out all the tasks provided in their work description; the nonautonomous were inclined to go beyond theirs; and only the followers of the negotiated organization stuck approximately to the definition. That is to say, all workers studied evolved to different degrees toward the theoretical description of the job of the semiautonomous worker.

On the other hand, this same followup revealed that inside the organization notable differences existed between the groups and even between the individuals of one group. While it frequently happens that workers adopt different methods for "craft" work of an extremely skilled nature, such a phenomenon is surprising in mass-production industry that is highly automated and where the worker does not produce directly but supplies and supervises a machine.

In order of increasing skill, here are the functions that are supposed to enlarge and enrich the job content of the operators:

— Handling: the autonomous and "negotiated" groups go fetch and prepare their carts and trays to be loaded. This operation in no way makes the work more interesting and quite clearly eliminates some employees, but it permits control of their portion of the entering trays as well as a better distribution of them to the machine. For the operators it also facilitates the elimination of defective materials.

— Control: the inspector supervises observance of such technical standards as temperature and machine speed. He insures that the trays of different types are not mixed up. Finally, he controls the quality of damaged trays. The autonomous and "negotiated" groups must carry out the control of temperature by checking the dials from time to time. Many do not do it, leaving the job to the technicians. In the same way, the control of damaged trays practically never is assumed by either the autonomous or by the "negotiated" groups, even though the first seem to go further, on the average, than the second group.

— Maintenance: maintenance workers can be divided into two categories: common laborers who systematically replace simple parts that are worn out, and skilled laborers who are called in at each breakdown or who carry out the inspection of the machines. It is mainly the first category that is replaced little by little in the process of autonomy. In most cases the autonomous workers and the "negotiated organization" limit themselves to extremely simple participation in changing used parts.

— The foreman: the originality of autonomy resides in taking over part of the work of the foreman. Besides administrative tasks, he has the job of running the shop according to a plan drawn up by someone above him. For that he divides the work, plans the hours for starting the machines, calls for maintenance men in case of breakdown, coordinates the acts of four teams, and enforces discipline. Finally, he represents, with union delegates, a means of addressing higher echelons for individual and collective grievances. Autonomy touches all these jobs. The autonomous workers and operators in negotiated organi-

zations themselves draft the orders for calling in the maintenance crew in case of breakdowns.

— Work management [ordonnancement]: the clearest difference between the different organizations lies in the distribution of work and the choice of hours for starting up the machines. This last point has great importance because it is a source of the greatest variation in productivity and also provokes strife among the crews. From the standpoint of profiting from the use of equipment, the best plan would be to start working on the machines the moment they stop and to restart them as quickly as possible. This optimum does not correspond to the optimum for work organization which lies in each group's being able to work at any time on a machine that has stopped.

In most cases the nonautonomous workers are gathered into groups of about five persons. Each group is given a certain number of machines to watch (essentially to intervene during a stoppage) and a certain number of machines to start at specific times. In the negotiated organization the foreman does not indicate the time of starting but only the succession to follow for starting the machines. In this way the operators do not have to decide about starting times, but what is asked, more or less, is that they start the machines at approximately regular intervals. They are autonomous under two essential constraints: the order of starting the machines and the quantity of work carried out. Outside of that they can organize the work as they wish, while the foreman attempts to have the machines start at approximately regular times.

On the other hand, the semiautonomous groups can choose the order and the time of starting. While the majority of groups is composed of four or five persons, the number varies according to the situation and to the shop. They run from two to fourteen persons (the fourteen people are operators who decided to outline the work of a whole shop by forming only one group within it). The cohesion of the group is maintained and the absent are not replaced. In certain cases it happens that the group maintains a quantity of overall work that is about constant; in other cases the work accomplished is proportional to the number

present. In accordance with its size, the group is assigned a certain number of machines that it must watch and start. It is up to them to resolve this problem in the best way, the foreman limiting himself to transmitting complaints of the crew following them, and to bringing pressure to avoid anarchical startups.

Followup on Production

The semiautonomous groups, and they alone, take charge of a certain number of administrative tasks. This assumption of power also fluctuates enormously according to the crews, the shops, and the groups. The majority of the autonomous workers make production graphs that are more or less complex and precise. Workers have even been seen returning home with the notebook of the group to bone up, some with their children, on the establishment of production curves.

Drawing up curves runs into difficulty because of the lack of training of most of them but also because of the deep prejudices that can be found in the attempts at training in economics. Workers do not have a good memory of schools, which excluded them from knowledge by a succession of failures for which they feel guilty. Many of them reject everything that reminds them of this frustrating situation and no longer want to have the feeling of "going back to school."

Finally, some are afraid to begin a path where they risk rapidly finding themselves overcome by their lack of competence. However, groups that make curves find a certain pride in access to intellectual work and in seeing results. This pride, when it does not collapse too quickly, correlates with the desire to go further in autonomy and a thirst for knowledge about the production that has pushed the firm to institute a new cycle of training about the product and its manufacture. Operators most involved in the elaboration of charts often want to take over in the near future the administration of their shop, independently of political and union cleavages.

Discipline

So far it is not possible to say that the semiautonomous groups have intruded on the domain of discipline. However, the problem has changed. Indeed, during the preceding period disputes between operators and supervisory personnel very often were over questions of work — essentially ignoring prescribed methods or insufficient cleaning. This type of conflict seems practically to have disappeared. The foremen hardly interfere in the problems of carrying out the work. However, they receive requests from workers to transmit complaints to the crew from the preceding shift or to straighten out a member who has been judged uncooperative. In the two cases intervention is limited to advice or to the plans for a meeting to discuss the problem. The foreman, then, goes from a role of repressor to the role of advisor for the autonomous worker.

Foremen often express the opinion that those who refuse autonomy are the same ones who do not wish to work. Differences of opinion between them and the autonomous workers also are mentioned. In fact, autonomous workers have simply accepted that the requirements for productivity of the shop be applied directly to them and not through the intermediary of a boss.

Shifting of Negotiation and Conflicts

In the traditional system negotiation of work loads is left to experts. To that end, each operation is coded, following several indices, according to its difficulty and the competence it requires. Once all movements and operations are coded, a simple calculation performed according to preestablished rules gives the qualifications and the rest periods for this work according to collective bargaining contracts. All changes in procedures lead to a sophisticated negotiation in which the unions seek to raise the qualifications while obtaining guarantees on the work load. So each modification of work leads to a series of consultations and negotiations, and sometimes conflicts, that take up some time.

Thus, recently customers asked for a change in the product which required an important change in the way of starting the machines. It seems that this change did not increase the work load; however, all nonautonomous workers refused to use this new operating method, while the autonomous workers readily accepted it. These contradictory attitudes are easily understood. For the nonautonomous the refusal constitutes a hope for negotiations which may bring some advantages in qualification and rest periods, or at least a guarantee of not being had. Autonomous workers attach less importance to conventional rest periods, since they themselves practically fix them. (3) As for increased qualifications, they do not expect them so much from changes in the details of an operating method as from an increase in their responsibilities.

Last but not least, negotiation based on a very precise process is no longer in keeping with work in constant evolution. The grading of jobs can be applied well only to rigidly outlined jobs. So the autonomous workers call on the union less often for work questions which they prefer to settle themselves. On the other hand, and this is nearly a surprise for the unions, their willingness to fight about pay and working hours has not weakened in the least. Functional analysis interprets this shifting of negotiation by considering the negotiation about operating methods as a job which was reserved in the traditional system to experts in job engineering and to shop stewards, but which was recently taken over by semiautonomous groups. On the other hand, conflict based on class interests could not be handled by this analysis, because for the autonomous workers as for the others, only collective action pays off. The unions have understood this. They feel they have not lost too much influence with autonomous workers but must pay attention to the rank and file.

IV. Attitudes in the Face of Change

- 1) Who Agrees with
Semiautonomous Groups ? (4)

A. Factual data

On the question of the overall evaluation of semiautonomous groups (5), 19 percent answer that is an excellent thing, 47 percent say it is rather a good thing, 17 percent say it is rather a bad thing, and 17 percent say it is a very bad thing. Therefore, 66 percent favor semiautonomous groups, with 34 percent against them.

The opposition decreases in proportion to the higher rank in hierarchy. Workers of classes 6 and 7 favor them by 46 percent, those of classes 8 and 9 by 77 percent, and classes 10 and above are 92 percent in favor.

One would have assumed that the fact of being unionized would make a significant difference statistically, because of the hostile attitude of the majority of union workers (CGT, CFDT). In fact, a difference does exist but is not significant. Of the CGT-CFDT unionists, 51 percent favor semiautonomous groups, and 71 percent of the nonunionists favor them.

This question generated a high percentage of abstentions (26 percent, especially among the workers). It can be deduced that the phenomenon of autonomous crews, very present in the plant and mentioned at the head of the questionnaire as the general object of the inquiry, is without a doubt a source of conflict and still unresolved for many. Indeed, the abstentions may not reflect a lack of interest but may be the result of uncertainty or of worry. It is a sign that the terminology and the reality that it covers are the object of internal conflict and psychological tensions that have not yet been clarified.

B. Conformity with management and opinion on semiautonomous groups

The correlation between these two terms allows us to measure the actual popularity of the semiautonomous groups. On the one hand, semiautonomous groups can be understood in themselves. Workers following this method accept it and even are devoted to it because of the effects that go with it (better

working climate, "humanization" of the work, real responsibilities left to the workers, change in the hierarchical class, and so on). But, on the other hand, semiautonomous groups came into being at the initiative of the hierarchy. Some favor them for this reason. To some it seems to be good or "normal" or prudent to accept these groups.

Some clues allow us to think that the attitude of conformity to hierarchy is linked to a favorable opinion toward semiautonomous groups and that resistance to interference from hierarchy is correlated to a hostile opinion of semiautonomy.

"How would you feel if you were transferred to a job equivalent to the one you have now but one that would separate you from your habitual coworkers? Would you be very dissatisfied, dissatisfied, or indifferent?" (Q. 26)

The answers to this question fell into a pattern of three nearly equal parts (33 percent, 37 percent, 30 percent). If a semiautonomous group exists in a shop, the most unhappy among possible transfers should be those who favor the method. Indeed, in a situation of autonomy the group role is very important. A transfer that separates one from his habitual companions should be felt more deeply by those who support autonomy, since it is based on a good relationship with fellow workers and on the solid bonds established with them. To be indifferent to a transfer means to be less attached to one's co-workers and, it follows, to be less favorably disposed toward semiautonomous groups.

Now, this is not true, as the following table shows:

	Favor SAGs	Dislike SAGs	
Very dissatisfied	60%	40%	100%
Dissatisfied	62%	38%	100%
Indifferent	80%	20%	100%

χ^2 significant at the .01 level.

What one sees here is a resistance to transfer rather than an attitude toward semiautonomous groups. The resistance to

a transfer takes precedence over semiautonomous groups and wipes it out. What links these two opinions more is a resistant attitude toward hierarchy rather than the feeling about working with a team. Those most favorable to semiautonomous groups belong mainly to the group indifferent to transfer, while the logic of the semiautonomous groups should imply a refusal of transfer. The semiautonomous groups are perceived more as an initiative of hierarchy than a phenomenon to be judged on its own merit.

A related area and one very sensitive to workers' opinions is approval of the current pay scale. An attitude of conformity to hierarchy is correlated with an opinion favorable to semiautonomous groups.

C. Class consciousness

Some questions were meant to measure the understanding, or the lack of understanding, of the gap between the workers' world and that of the employers. We have regrouped these questions under the term "class consciousness," it being understood at this stage of analysis that this expression measures only the answers to our questions.

What could be the significance of a relationship between our index of class consciousness and the opinions that one holds of semiautonomous groups? If this link exists, it shows that the semiautonomous groups are viewed as a part of employer strategy and are seen as a threat to worker groups. Then, in the eyes of the workers most sensitive to this aspect of class consciousnesses, the semiautonomous groups will seem to be a maneuver coming from the management. This is what happened.

"Here are two different opinions on industry in general. Indicate the one you prefer (21 percent abstentions):

"1. Some say that a firm resembles a football team because the work of the whole team leads to success and that it is to everybody's interest (55 percent).

"2. Others think that working together in industry is impossible because employers and workers are really on two dif-

ferent sides" (45 percent). (Q. 50)

Relating the answers to the above with the opinions on semi-autonomous groups gives the following table:

	Favor SAGs	Dislike SAGs	
Football team	81%	19%	100%
Two different sides	49%	51%	100%

χ^2 very significant at the .001 level.

The perception of a gap between the world of employers and that of workers correlated with a very unfavorable opinion of semiautonomous groups. By linking these answers to those on the attitudes about hierarchy, it can be concluded that semiautonomous groups seem to the workers to be a link with hierarchy and to be initiated by it. Semiautonomous groups are rejected because they seem to be an initiative of the employers and not because of what these groups really represent.

It is possible that the workers' categorically unfavorable opinions about a strong "class consciousness" will change in the future. In regard to this we certainly count on being able to revise the questionnaire within a certain time. This is because the questionnaire was circulated during the most critical period of confrontation between the unions and management on the question of semiautonomous groups. It is possible to consider that the stiffening of union positions at that time reflected the opinion of the most politicized workers. Since then opinions most certainly have evolved, since we have seen unions sign agreements on autonomy (in particular the one we have called "negotiated organization").

2. Influence of Work in Semiautonomous Groups

The preceding section was devoted to the workers' judgments on semiautonomous groups. But the questionnaire was not limited to research on opinions. Our ambition was broader:

It was intended to learn if working within the framework of this new work organization altered the attitudes of workers. The stakes were important. Speeches frequently are heard on the transformation of "mentality" that a new way of work could bring about. Does the fact of working in semiautonomous groups alter the workers' attitudes with regard to the working group, with regard to the meaning of work itself, and with regard to class consciousness, as we have defined it?

Generally, it is possible to answer that while the attitude toward work itself undergoes an important change, the attitudes showing that one belongs to the working class [groupe ouvrier] are not affected by semiautonomous work.

A. Attitude toward work

Autonomous workers find their work more interesting than those who are not autonomous, but much less so than maintenance workers. Autonomous workers fall between the two other groups. This result is a weak one and would not be very meaningful if it were isolated. But a whole series of results converge absolutely in the same sense.

First of all, work is deemed clearly less tiring by autonomous workers. Are the answers convincing? Indeed, it has been possible to say that some workshops used by these workers were more modern than others. In fact, this phenomenon is not absolutely general and could have weight only in the statistical results. It relates only to rare, particular cases. The reverse is true. The autonomous workers all carry out more jobs than their fellow workers, and their work load is thus heavier. Therefore, their estimation of fatigue should be that it is more severe. But it is nothing of the sort. The autonomous workers estimate their work far less tiring than do the others.

Of course, workers working autonomously feel themselves less tied to a rhythm of work held to production. They are freer but nevertheless subject to the cadence of the machine like their comrades. The word "rhythm" had been introduced intentionally in the drafting of the questions concerning subjection to the

imperative of productivity of the freedom to work at one's own pace:

"What would you say on the subject of your work (16 percent)? (1) We are still subject to the pursuit of efficiency [rendement]. (2) We are free to work at our own rhythm."

	1	2	
Nonautonomous	81%	19%	100%
Autonomous	70%	30%	100%
Maintenance	35%	65%	100%

χ^2 significant at the .001 level.

We note here the great disparity between the two groups and the maintenance workers. The autonomous system improves the work rhythm for the worker but does not fundamentally change it. He still remains very subject to the machine, which is not the case with the maintenance men. The restyling of work under the new organization is an improvement. It is in no case a transformation, even if this improvement is perceived by the workers. On the other hand, there is no difference between the first two groups in their judgment on the work load. Nonautonomous and autonomous workers estimate in identical proportions that "one is not overwhelmed with work, there are some quiet moments" (47 percent and 51 percent), and that "the work load is too heavy, one is often overrun by the work" (53 percent and 49 percent). Maintenance workers are clearly different from the others; they judge themselves less pressed than their comrades (71 percent).

Finally, autonomous workers are not more favorable to the semiautonomous groups than the others, (nonautonomous or maintenance workers). Indeed, 58% of the autonomous favor the semiautonomous groups, while 63% of the nonautonomous and 65% of the maintenance workers favor them. If autonomous workers acknowledge an increased interest in their work, their opinion on semiautonomous groups remains above all linked to their political options.

Greater ease of work, the fact that it can be more interesting, less tiring, and so forth, in no way reduces the consciousness of belonging to a social group within a situation of antagonistic classes. Workers have a very clear view of this, and it can be seen in analyzing the answers to questions referring to class consciousness, as we have defined it.

B. Class consciousness and unions

The evaluation of industry in general, based on defining the firm as either a football team or as an unyielding antagonist (see above) is noticeably the same for the autonomous workers as for the others. There nevertheless exists a slight trend for the autonomous to choose the evaluation "football team."

But this trend is not in the least confirmed by the other questions. Evaluation of the salary scale in the firm is identical for the three groups. To one question linking the prosperity of the firm to the rise in the workers' standard of living, the percentages of responses are strictly identical: 40 percent agreed, but 60 percent thought that the prosperity of the firm would change nothing in their own living standard.

We were able to go further and, aside from these evaluations in the area of class consciousness, to analyze the relationships with unionism. One often hears that the new ways of organizing work separate the workers from the union, and this opinion has sometimes been expressed in our presence by union representatives. What data does the survey yield on this?

Considering what has been written earlier in this article about class consciousness, we can already see that it is self-evident that relations with the union will hardly be different, inasmuch as unionism and class consciousness are linked. But the new organization can lead to a suppression of specific relationship to the union. So far the results obtained are difficult to interpret because the differences are small, at the threshold of significance. Several questions asked for a choice in favor of the union or against it — most of the time in specific work situations. Taken one by one, none of these questions give any dif-

ferences, since the position of the autonomous workers is the same as that of the nonautonomous. But the variable constructed from these questions shows a slight significance indicating that the choice in favor of a union delegate is more systematic in the case of nonautonomous workers, while autonomous workers favor recourse to the delegate in a more subtle way, depending on particular situations in the shop.

But we cannot speak of splitting off or estrangement from the union. Proof is found in the question on union voting. All groups vote strictly the same way in professional elections (40 percent for the CFDT, 40 percent for the CGT; maintenance men are more in favor of the CFDT; the rest of the sample — including foremen — are in favor of the CGT). The influence of the new organization of work, therefore, is very weak, and — particularly in relation to unions — has no bearing on the class consciousness of the workers.

We see this evidence again in response to a question asking for an overall appreciation of the firm:

"How do you consider your firm, compared to those that you know? Do you find it: better than the others (36 percent); similar to the others (63 percent); not as good as the others (1 percent)?"

	Better	Similar	Not as Good	
Nonautonomous	34%	65%	1%	100%
Autonomous	34%	65%	1%	100%
Maintenance	17%	85%	0%	100%

We know no better way to show that the change in work organization does not usher in a change in the attitude toward the firm.

So, if the new organization effectively increases the interest in work so much that, in spite of the opportunity offered in some workshops to return to the old method, workers have rarely abandoned semiautonomous groups, the change brought about is not radical. In particular, class consciousness, support of the union, and opinions about semiautonomous groups have not been altered by the change to semiautonomous groups.

Conclusion

What conclusions can be drawn, aside from those that have already been brought up in this article? Two factors limit the conceptualization of the study. On the one hand, the kind of research that was done at plant X is of the case type [monographic], which, by definition, lacks the possibility for comparison with studies in other plants. On the other hand, the analysis of the statistical results is still incomplete. At least we are able to suggest some leads.

The ideas that seem to be at the focal point of this study revolve around the notion of alienation. We are well aware of the limits of this concept and of the dangers of using it in empirical sociology — that is to say, in our situation. Nevertheless, it seems evident that the new organization of work changes nothing in the feeling of the workers about the class situation, while it does bring change in regard to their work. Work tends to become less instrumental, less of a service required solely for the salary. But here we are going beyond the description that has been presented and into the domain of the analysis that is underway. It seems that later we must distinguish between (1) groups of workers who are conscious of selling their work contribution in return for a passive obedience to the firm, and (2) other groups that live by an exchange (the product of their work for a price). The basis of this distinction seems to be related to sociocultural origins, but it could be influenced by the situation within the organization. For the contribution-selling group semiautonomous groups could bring a new source of alienation in that they require a greater involvement in work, which, in any case, remains repetitive and monotonous. For the exchange group the semiautonomous group seems to restore meaning to their work by allowing them obvious action on the product. Nevertheless, it surely seems that whatever the evolution of the feeling of alienation in one group or the other, the idea of exploitation will remain unchanged, whether as an objective reality or as an image retained by the actors.

Perhaps the interest of this study is to show the limits of any

innovation in work organization inside a plant. Beyond present efforts, work organizers could turn to a still more liberal structure — that of selecting work (work à la carte), for example. Our inquiry has taught us that radically different organizational setups can coexist for the same work and in the same shop. The questionnaire has shown that no form of organization, especially for monotonous and repetitive work, was the best for everyone. Perhaps industrial engineers will make more and more allowances for workers to establish for themselves the definition of their own jobs on the basis of their talents and their individual plans. But they will know the limits they face.

Notes

1) It is not surprising, then, to find no mention of the plant's identity. The experiment was still in progress at the time of this writing.

2) Although the problems of establishing these groups are not treated in this article, such establishment was made within the context of a reduced labor force. Semiautonomous groups allowed the abolition of some jobs, and people feared a substantial increase in the work load. The agreement in question gives assurances on these two points, while accepting the existence of different organizations in the same shop. Finally, let us note that in spite of the active policy of reducing the work force, there was no dismissal except for disciplinary reasons. Management agreed to a policy of guaranteeing employment.

3) In fact, it seems to the observers that autonomous workers spend overall more time in the shop than the others. While the nonautonomous workers go to the recreation room as soon as a period of operation is completed, the autonomous workers easily remain in the shop to putter around or to chat.

4) At the time the questionnaire was circulated, the "negotiated organization" did not yet exist (the unions were maintaining a very hostile attitude toward all forms of autonomy). The workers questioned have been divided into three categories:

autonomous, nonautonomous, and maintenance workers. The use of the term "autonomous" here designates workers in semi-autonomous groups and those working in a similar setup. Among maintenance workers, only skilled workers (O.Q.) have been included.

5) "Some workshops of the plant are operating with an organization of autonomous crews. If this organization were extended to plants other than X, would you say this is a good thing; this is a rather good thing; this is a bad thing; this is a very bad thing?" (Q. 56)

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