**How Rules Operate in Practice**

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 It is organizational theorists who have tended to focus most on the question of how rules operate (March & Simon, 1958; Cyert & March, 1963). The book by March, Schulz, and Zhou (2000) on changes to written rules in organizations shows, once again, that advances in the understanding of rules are still coming from this school of thought. Economists bypass the practical ramifications of rule enactment with the concept of rational behavior. However, Sen and Simon both question the assumption that individuals always seek to maximize their own interests (eg. Sen, 1979) and criticize the paradigm for its inability to account for the reality of routine behaviors. Organizational theory and research still falls short of addressing the question of how rules operate.

 Rules are generally considered as resources to be drawn on in the execution of employment contracts; however, they do not eliminate the uncertainties of the wage relationship. In the world as seen by economists, rules operate like ‘*rails compelling a locomotive’* (Wittgenstein, 1958: I § 116). Rules have no meaning outside of their practical application. Indeed, it is their practical application that gives meaning to rules (Wittgenstein, 1958). From this point of view, the idea that the parties signing an employment contract mobilize rules, which seems so simple to economists, turns out in reality to be extremely complex. What does the mobilization of rules involve in practice? What does it mean to apply and follow a rule?

 The idea that rules require interpretation is also found in the work of legal experts (Atias, 1982; Jeammaud & Lyon-Caen, 1982). The marks left by past interpretations of legal rules are visible in case law. However, law differs from rules in that it is by definition obligatory in nature and sometimes accompanied by sanctions or punishments. In contrast, rules are explicit, public statements that trigger an action with a certain degree of predictability but do not determine it. Since a rule is removed from the actual solution, a rule always requires interpretation. While rules make it possible to find a solution to a problem, they do not provide that solution in any detail (cf. Atias, 1982). The need for interpretation is reinforced by the fact that rules do not operate in isolation but as part of a system of rules and that, in order to apply a rule, reference frequently has to be made to another rule.

 While it is obvious that the obligatory nature of rules, when they have that quality, is a powerful lever for the transmission of their effects, it is far from being the only one. Some rules fail to achieve their objective despite being obligatory. Other rules produce a diversity of results despite the fact that, by definition, they have a single objective. Such differences suggest that rules draw their strengths and their limitations from the fact of being rooted in the social world. From this perspective, it seems important to establish how rules operate and how they acquire their specific powers. A better understanding of the working of rules would help practitioners avoid inefficient rules and instead create rules that achieve the desired objective.

**1. The introduction of a team productivity bonus in a Workshop of the Paris Métro (1993-2001)**

 This paper draws from observation and analysis of the introduction of a new rule - a team productivity bonus – in the *Electronic Equipment Maintenance Workshop* of the Paris Métro (In French: Atelier de Maintenance Électronique, hereafter AME), the subway system of public transportation in Paris, France. The study spans the years between July/August 1992 and 2000 and explores the effects of the rule introduction on the overall regulations of Paris Métro at the time, on the relationship between employees and the entire set of operating rules, on the strategies that teams adopted in order to maximize their bonuses and, finally, on labor productivity in the workshop. Rather than analyzing the effects of the new wage rule in isolation, this study considers the entire set of rules into which the new rule was incorporated. The main reason for this is that the rules governing an activity are incomplete; each of them needs to be interpreted in the light of information contained in other rules, as well as of custom and practice and context.

 *The Data Gathered*

 I obtained straightaway the agreement of management. However, the research could not start without the agreement of shop stewards and operatives on the objectives and method of my research. Workers were sceptical of the observations at work. Shop stewards thought I was an agent of the direction in charge of controlling them. Nevertheless, the fact that management did not pay me played in my favour. At the end of a long meeting, they agreed to my proposal. Then I gathered data in three stages. Each of them was useful for the purpose of this paper.

Firstly, between February and April 1993, I engaged in five interviews with management and 30 with workers. I asked managers how the new pay rule lies within the policy framework of the *Workshop*. I asked workers what their understanding of the productivity bonus (hereafter abbreviated as ‘PB’) was, and for which reasons they either agreed or not to the ‘PB’.

Secondly, I carried out observations during a period of three months (December 1994 to February 1995) with an ergonomist from the National Agency for the Improvement of Working Conditions (ANACT). Together we observed three teams, each of them working with a slight different technology (control electronics (EK1), power electronics (EK3), and micromechanics). In each team, we did an immersion of two days during which our working day extended over the longest time slot worked by the operatives (7 AM - 7 PM). We observed them at work and questioned them about what they were doing, how and why, in what order, and so on. Our attention was concentrated on the nature of the cooperation between the operatives, and on the methods of tasks selection. We kept our field notes. Our reports came up for discussion with operatives who validated them. Afterwards, they handed them to management.

The last stage consisted in reconstituting from 1992 until 2000 monthly statistics related to output, labour productivity, fault recurrence rates, and debt in volume terms for the three teams whose strategies I examined in detail (EK1, EK3).These teams are those for which I did observations between December 1994 and February 1995. Moreover, they are representative of *the* *Workshop* activity. Taking these monthly figures as a starting point, I calculated the quarterly figures corresponding to the bonus payment periods (six months). I also gathered the percentage of the maximum bonus obtained by each team at the end of each bonus period. From these indicators, I inferred team routines that I exposed to management and to the supervisor concerned. After discussions, which sometimes led me to change some interpretations, they validated my conclusions.

 *The Work Process*

*The* *Workshop* is responsible for the maintenance of the electronic and micro-mechanical equipment and the relays of the Paris Metro[[1]](#footnote-1). The operatives of the *Workshop* are required to deliver the repaired equipment without any delay to the ‘*line operators*’ of each Metro line. In the following, I will often refer to the latter as ‘*lines*’. As I will explain, the delivery of the components at the due date is a rather complex activity. Before analysing this issue, an outline is required of the operatives’ organisation, and of the rules they have to follow.

The 122 operatives are divided into eight teams: five of them specialise in repair and maintenance, two are in charge of logistics, and one constitutes the engineering and design department. However, for my purpose, I will concentrate on the five repair teams that are responsible for maintenance of the electronic circuit boards, power electronics, micromechanical equipment, and relays used in critical failure mode on the various Metro lines. One of the difficulties of the work results from the fact that electronic operatives have to repair three generations of equipment, dating from 1955 to today. Therefore, operatives must deal with a multiplicity of models (around 500 models in electronics), which requires extended knowledge. While operatives are members of a same team, the tasks performed are individual.

The *line operators’* tasks consist in inspecting the state of the trains and then removing the faulty equipment; these tasks constitute *curative operations* or *correctives procedures*. The *lines* are the sole judges of which items of the equipment should be removed for repair. For example, they decide to remove either a single faulty circuit board or all the boards in a train. Electronic equipment undergoes only corrective procedures. Conversely, as micromechanics and relays are subject to wear and tear, the *lines* apply security rules that govern the cycles of maintenance procedures. They depend on the number of kilometres travelled. However, these are twofold: the *major services* every 25,000 kilometres consist of technical inspections that involve dismantling, cleaning, and removing the grease marks of the units. The *standard services,* which include safety inspections every 8,300 kilometres, are more superficial. To sum up, corrective procedures are random while preventive operations are scheduled.

The logistics builds on two rules dealing with the organisation of work. First, the *schedule for the major services and the standard services*, based on the number of kilometres travelled, has a time horizon ranging between one and three months. Secondly, logistics writes down, updates, and displays the so-called ‘*debt sheet’* for the corrective tasks, based on the state of the rolling stocks and the removed equipment. The ‘*debt sheet*’ is a listing that shows operatives on a twice-weekly basis that the amount of the various units and electronic circuit boards required. The expression ‘*debt sheet’* refers to different kinds of delay that a team may encounter. The first one is a delivery delay to the logistics, which is in charge of sending back the items to the *line operators*. This delay involves a *store debt*[[2]](#footnote-2)that arises if the logistics does not have enough stock of a given part to meet the needs of the *line operators. The store debt* makes upa safety margin, ensuring that logistics can always meet demand from the *lines*. It acts as an alarm signal. The logistics technicians determine the level of debt, which depends on the existing stock, frequency of breakdowns, and the age of the equipment (and so on), and therefore varies from component to component. The second delay is more serious. A *line* *debt* arises when the *line operator* puts a train out of service because he cannot replace the faulty unit by a new one. During the strikes in 1988, *line debts* were frequent.

 *The Definition of the Productivity Bonus*

In the following, I present the productivity bonus that management introduced in the middle of 1992 to increase labour productivity. Before that date, the direction’s *Workshop* considered as normal that work hours could vary between an upper and lower threshold, respectively 6.50 hours and 5.80 hours, the working time being 7.60 hours. The former, called the ‘*statutory working time’*, is calculated by subtracting from the ‘*legal working time’* (7.60 hours), the 1.1 hours spent on changing, showering, being paid, cleaning the work stations weekly, and statutory absences. The latter, called the ‘*normal or average working time’*, resulted from management evaluation. The difference of 12% originated in the various lost hours tolerated by management. Officially termed ‘recuperation time’, they amounted to a production loss (see Table 1). In setting up the new pay rule, the direction no longer considered working less than 5.80 hours as normal. Essentially, the ‘PB’ aimed at increasing the intensity of work by reducing the difference between statutory and real working times.

**Table 1: Working times - "Normal" and Statutory Hours - according to the *Workshop* rule**

- 7.60 hours spent at work: legal working time

- 6.50 effective hours of statutory time (5.8 x 1.12) => "PB max"

- 6.34 effective hours by team 1

- 5.80 minimum "normal" hours => "PB min"

For these two thresholds, production equivalents were defined, since the ‘PB’ was to be obtained, not by staying a certain hours at work but by achieving an output equal in terms of quantity and quality to some fixed minimum. The average number of effective work hours was reckoned to be at such a feeble level that management decided to fix the equivalent in output terms of the lower threshold of 5.80 hours as a minimal objective. In the same way, the equivalent input of the upper threshold of 6.80 hours is the maximal objective. In table 1, team 1 that works an average of 6.34 effective hours has only to improve its production to an amount of 0.16 hour to get the ‘*PB max*’ if the quality indicators have reached the top level.

Half of the bonus depends on output volumes. Since the time spent to repair each unit is very different from the others, management decided to apply a unique ‘weighting coefficient’ to each team activity. Thus, the output has one measure, the ‘*Weighted Output Unit.*’[[3]](#footnote-3) It is obvious that many inequalities remain[[4]](#footnote-4). First example: corrective maintenance procedures, equipment modifications, and preventive maintenance operations have the same ‘weighted coefficient’. This means one considers them as equal outputs. In fact, they take very different lengths of time to complete. Second example: the shortest corrective operation takes half an hour, while the preventive maintenance of some parts may require 13 hours’ work.

The other half of the bonus depends on work quality that has two aspects. Internal quality is a measure of the ability of each team to carry out repairs within the times allotted. The level of the team *debts* to the logistics evaluates this capability. External quality depends on client satisfaction. This is a function of the failure rate of repaired equipment, defined by a breakdown in the six months following the corrective procedure.[[5]](#footnote-5) The productivity bonus varies linearly between two intervals. If the team attains only the ‘*PB min*’ the bonus is nil; it is maximal (around 8% of the operative's salary) if the team attains or goes over the ‘*PB max*’.

**2. The different teams’ strategies**

 *The comparability of the teams*

 Before analyzing teams’ strategies, we must prove that teams are comparable. Firstly, they work on different applications of electronics technology.

Secondly, the introduction of the productivity bonus gave rise to a need to create some sort of equivalence between the procedures carried out by the various teams. This is why the ‘weighting coefficient’ was devised; it is defined, for each basic output unit and for each type of corrective and preventive procedure, as the average number of hours required per procedure. This ratio has been recorded in the AME database since 1991. Thus each procedure, modified by its coefficient, is equivalent to n ‘weighted output units’ (WOUs), in which n is the weighting coefficient. This coefficient changes on the basis of an assessment of exogenous changes affecting the working time required for a given type of procedure.

Thirdly, in addition to a three-yearly review, the original team contracts provided for the negotiation of amendments in situations in which teams were likely to be penalized by an external event. As it turns out, a considerable number of amendments had been negotiated mostly with the aim of preventing a team being penalized for events for which it is not responsible. Thus in the event of exogenous shocks, usually caused by problems with component supplies or the breakdown of industrial equipment, such as lifts (thereby paralysing the flow of equipment) or the machine used to polish and clean electronic circuit boards and test benches, an amendment to the team contract is negotiated. Consequently, exogenous shocks cannot be adduced as an explanation for differences in the various teams’ results.

 *Analyses of the teams’ strategies*

In order to analyze the teams’ strategies, it was necessary to reconstitute a monthly database depicting the evolution over time of the various teams. It was also necessary to reconstitute debt levels and fault recurrence rates. I examined in detail EK1 and EK3 teams that I observed before.

 *EK1: Towards a strategy of permanent renegotiation of results*

In a first period, two of them - control electronics and power electronics - changed their prevailing routines. Shortly after the introduction of the productivity bonus scheme, the operatives of the team, called EK1, gave priority to the procedures that generated the most ‘Weighted Output Units’ in a minimum of time, by repairing the single circuit boards rather than whole units, etc. This strategy, adopted during the first two six-month periods (November 1992-October 1993), immediately proved to be profitable. Labour productivity reached an output figure 11.3 per cent above that triggering the maximum bonus while debt levels and fault recurrence rates were also good. Thus, the operatives received the full bonus. Obviously, maximising the output is no longer compatible with quality standards, whether external (fault recurrence rates), or internal (debt levels). First, the productivity strategy reduces the reliability of repairs that increases the fault recurrences and as a consequence, the debts levels. This effect is particularly strong in the team EK1 where the equipment is ageing. It is the reason why the fault recurrence rate rises very sharply, which leads to massive indebtedness. Secondly, maximisation of the output is no longer compatible with adherence to the priorities detailed on the *debt sheets*. This is the second factor that contributed to the massive indebtedness from May 1994 onwards (see Figure 1 in the Appendices). The team found itself in a critical situation that forced it to follow all rules constituting the ‘PB’.

During this period, the six-month bonus calculation period was drawing to a close, and management should logically have paid 2.6 per cent of the bonus to operatives who, everyone was agreed, had worked harder than before, despite the poor results. It was the supervisor, again acting alone and against the operatives’ advice, who took it upon himself to negotiate the level of the bonus payment with management. The latter embarked upon a process of *debt discharge or neutralization*, which led to the production manager and the supervisor reaching agreement on an amendment to the team contract that made it possible to pay 92 per cent of the bonus. The following commentary can be read on the output chart displayed at the entrance to the team’s work area: *‘Debts written off for this period because of the MF 77 circuit reconditioning campaign’*. This marked the beginning of the team’s policy of systematically negotiating amendments to their DEC contract.

In making such a firm stand and refusing to cooperate with management in restoring the situation to normal (rejection of overtime), the operatives were disputing the overall coherence of a system of incentives rules that failed to make the constraints of short-term profitability compatible with the aim of maintaining the rolling stock in good condition over the long term. They were adapting the *exit* strategy as analysed by Hirschman (1970). In making no demands of management, despite the obvious injustice of the situation, the operatives were showing themselves to be wholly disinterested, thereby lending credibility to their decision to adopt a total quality approach. By 'releasing' virtually the whole of the bonus, management, on the other hand, was admitting that there might be any dissociation between output volumes and payment of the bonus. In doing so, it was rejecting an excessively productivist approach to managing the productivity bonus rule in favour of a more negotiated approach. This decision risked undermining the credibility of the DEC. It was not unusual during this period to hear the operatives saying: *'we'll get the bonus whatever happens'*.

 The episode of October and November 1995 seems to have opened the way for a different strategy, which involved bargaining over the results for the six months that had just finished (period t-1) and then using the negotiating results as the basis for calculating the productivity bonus to be paid in period t. And indeed, EK1 is the team that has concluded that most amendments since the introduction of the productivity bonus scheme, a total of 16 between 1993 and the year 2000, an average of one every six months. At this stage, there is some value in outlining the various strategies adopted by the teams as reflected in the provisions of the amendments they negotiated. Some of these agreements constitute decisions to revise the rules laid down in the DEC agreement, while others invoke decisions, in the legal sense of the term, that are concrete, categorical and non-permanent. Some of these decisions adjust a team’s past results, while others, anticipating poor results in the future, adjust them in t+1, t+2, and so on. Decisions to revise the rules do not have the same implications as decisions to modify the past or the future, particularly when it comes to the degree of credibility attached to the bonus scheme.

 These differences, which serve to locate the strategy adopted by EK1, are summarized in Table 2 below. The table is based on an examination of all the amendments concluded in the OF AME, the aim of which was to classify them on the basis of various criteria. What was modified? What are the reasons? Who were the team supervisor and the production manager when the amendment was signed? Does the amendment constitute a decision to revise the rule or does it invoke a decision? Does this decision relate to the past or the future?

**Table 2: Decisions and revisions of rules in amendments to the DEC agreement (1992 – 2000)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Past  | Future | No. of amendments 1992-2000 |
| Teams | No. of decisions adjusting the result of the DEC in t-1, t-2 | No. of decisions to revise the rule |  |
| EK1 | 16 | 0 | 16 |
| EK2 | 4 | 2 | 6 |
| EK3 | 2 | 5 | 7 |
| EK4 (from late 1996 to 2000) | 2 ½ | 5 ½ | 8 |
| Micromechanics | 2 | 5 | 7 |
| Relays (1992- March 1999) | 0 | 2 | 2 |
| Total | 26 ½ | 19 ½ | 46 |

 All the amendments negotiated by EK1 are decisions that modify the results of the previous period, particularly the level of debts, with phrases such as: ‘debts must be adjusted as follows…’. The method involves allowing exceptions to the results that count towards the calculation of the productivity bonus. EK1 is the only team that has more or less systematically modified its actual results; finally, the amendments concluded since 1998 have led to the team being paid the maximum bonus.

 One fundamental and probably unusual conclusion emerges from this analysis: the bonus paid always equates to an actual daily working time of 6 hours 50 minutes but not necessarily to an increase in labour productivity. On the one hand, the negotiation of amendments has the effect of decoupling actual results from the awarding of the bonus. Bonus payments have remained fairly stable, always close to the maximum, when compared with the evolution of the various indicators determining them. **On the other hand, the productivity rule, which was initially supposed to be a rule to be applied on the basis of team results, gradually became a negotiable rule.** It is the product of a battle of wills between the production manager and the team supervisor. This aspect of the diagnosis will be verified in the other teams.

 *EK3: from maximization of WOUs to the forward-looking management of debt sheets*

 *Favourable results and maximum bonus payments*

EK3 operatives have always obtained the maximum bonus, which reflects the generally positive results they recorded between April 1993 and October 2000. The annual rate of growth in labour productivity is + 3.8 per cent, while debts and fault recurrence rates declined at a rate of – 18.9 per cent and – 4.3 per cent per annum respectively, as Figure 2 shows.

 Even before the introduction of the DEC, EK3’s labour productivity was very high. In 1991, average working time was estimated at 6.39 hours, whereas the ‘standard’ working time equating to the output required for payment of the maximum bonus was 6.50 hours. In concrete terms, the operatives had to improve their daily productive effort of 0.11 hours, or about six minutes, in order to obtain 7,000 francs, assuming that the other indicators used to calculate bonus payments were at the maximum level required.

 However, these apparently favourable factors do not constitute a guarantee that the maximum bonus will be received over a period of eight years. In order to reconstitute the team’s strategies, we need to compare various data, as we did in the case of EK1. Thus statistical analysis, changes to the rules governing the bonus scheme, and in particular changes to the standards for debt levels and fault recurrence rates through the negotiation of amendments to team contracts, together with the management style of the various supervisors who succeeded each other at the head of the team, all have to be taken into account.

 Examination of these various elements over the period 1993-2000 reveals a discontinuity in April 1996. On the one hand, this month marked the first time maximum labour productivity was achieved and the last time the maximum fault recurrence rate was recorded. On the other hand, the whole set of rules governing the DEC was beginning to change; in particular, the first amendment to the team contract, the only legal mechanism for modifying the rules governing thresholds, scales and coefficients, was signed in May 1996. Incidentally, EK3 was the only team not to have negotiated an amendment to its contract before 1996.

 In reality, closer examination of the content of the amendments shows that the real break occurred in April 1997 since it was from this point onwards that the nature of the amendments began to change following the arrival of a new supervisor. This is why we hypothesize that a shift in strategy occurred in the second quarter of 1997.

 *Maximizing the ‘weighted output units’ (1993-1997)*

 At the beginning of the period, when debt levels were declining, productivity was rising slowly; subsequently, the converse was the case. It would seem, therefore, that the operatives were not *continuously* adhering to the priorities imposed by the *debt sheets*, otherwise debt levels would have declined significantly as labour productivity rose. The operatives selected those procedures that minimized the time spent on each repair, in such a way as to maximize output. They gave priority to the easiest procedures, those that generated the most ‘weighted output units’: individual circuit boards rather than whole units, and so on. This strategy was a rational one. On the one hand, the productive effort required was minimal – the team was only 1.7 per cent short of the output figure required for payment of the maximum bonus. On the other hand, if the team’s output figures exceeded the threshold that triggered the maximum payment, any excess could be carried over to the following period, which was not the case with debts and fault recurrence rates.

 It was probably in order to encourage operatives to take action to reduce debt levels that it was decided in February 1996, as management and team supervisors were engaged in the triennial review of the DEC contracts, to apply new, much higher weighting coefficients. These coefficients were applied retrospectively, with effect from May 1995, which enabled the team to exceed the output level triggering the maximum bonus payment while at the same time working to reduce debt levels; some of the parts in question had to undergo *reconditioning* or *general overhaul*, which increased procedure times.

 *A shift in strategy: revisions of the rules and the introduction of conditional rules (1997-2000)*

 The second phase, which lasted from April 1997 until October 2000, saw the emergence of two new characteristics, namely a decline in debt levels (- 35.9 per cent per annum) and a new policy on amendments. Under the influence of a new supervisor, the purpose of the amendments underwent radical change. In contrast to the first two amendments concluded on 9 May 1996 and 17 April 1997, the next five amendments anticipated a future difficulty by introducing rules that were conditional on a particular event, usually relating to the availability of a missing component. The supply problems that began to make themselves felt from 1996 onwards stemmed from the fact that suppliers were working on a just-in-time basis, which extended delivery times from four to six months. The change the supervisor introduced was a fundamental one. Unlike decisions, whose effects make themselves felt in a specific and different way each time and are exhausted once enacted, rules modify the context within which work is organized and the conditions under which the bonus is obtained, thereby opening up a space within which choices can be made.

 The aim of the new policy on amendments was to prevent operatives being penalized for organizational shortcomings for which they were not responsible. However, it does not explain the extent to which debt levels declined. At the same time, the supervisor required the operatives to give priority to clients’ needs, and in particular to the *debt sheet*, rather than to easy procedures. Finally, he put in place a *predictive maintenance system* based on a detailed analysis of the history of each unit sent for corrective maintenance. As a result, components were replaced before they failed. The data on the damage to each unit gathered in this way could also be used to predict, to some extent, future demand for components so that they could be ordered in advance.

 Thus the supervisor’s strategy created the conditions under which labour productivity could continue to rise and debt levels could be reduced. However, in the midst of all these efforts to strike a balance between the rules on quantity and those on quality, the operatives also perhaps managed to extricate themselves from the situation fairly well by concentrating on the debts that were easier to discharge, that is the *non-recurrent faults*, while at the same time fulfilling their responsibilities in respect of the *debt sheet*. Maximizing the productivity bonus was still compatible, if only in the short term, with satisfying client demand. This would be one possible explanation for the negative correlation between debt levels and fault recurrence rates during this period. This team adopted a somewhat different strategy from that adopted by EK1. The maximum bonus can never be obtained by recourse to just a single strategy, since each one comes up against the limits imposed by the DEC rule system. The strategy of maximizing labour productivity by concentrating on procedures that take little time comes into conflict with the rule imposed by the debt sheet and telephone calls from the line operators. There was a shift of strategy in order to give priority to clients’ needs while at the same time maximizing the productivity bonus, the solution being to concentrate on *debts caused by non-recurrent faults*. The most effective way of achieving the maximum bonus seems to be to find the correct balance between the constraints imposed by the various rules. The supervisor was also obliged to engage in these manoeuvres with the rules. Firstly, in return for the action on debt reduction, he managed to obtain changes to the rules governing the three possible levers: the output weighting coefficient and revisions of the debt schedules and of the fault recurrence rates.

Secondly, he innovated by introducing conditional rules. However, the opportunity to make these changes depended to a large extent on the balance of power between the production manager and the supervisor, and on the latter’s credibility. It would seem, therefore, that the team’s results reflect a balance between the various rules.

 *Conclusion of this section*

 At the heart of this section, lies the notion that there is no sense in seeking to explain how rules operate without at the same time investigating how individuals or groups act upon them. Two major conclusions can be drawn from a comparison of the teams’ performance as measured in statistical terms with the amendments to the team contracts, the triennial reviews of the contracts and the percentage of the bonus obtained.

Firstly, there is dissociation between productivity gains and payment of the bonus, since operatives can obtain the maximum payment without their productivity figures being at the required level. In other words, labour productivity had changed during the period. *Initially, this variable which is calculated (Production in volume terms/ number of hours of work) became a negotiated variable between the direction and the supervisor.* This policy started in November 1994 at the time of the dispute within team EK1. In retrospect, it would seem that it was the first step towards a negotiated management of the bonus rule. A proliferation of amendments to team contracts and changes to the weighting coefficients are the main instruments used in this new management of the productivity rule, even though the latter were conceived and deployed as a means of preventing teams from being penalized by exogenous shocks for which operatives are not themselves responsible (technical problems, difficulties in obtaining the components required for repairs, and so on). Thus the supervisors’ teams use the results produced by application of the rules as a basis for renegotiating their teams’ contracts and putting forward amendments of their own. Among the variables that are the object of negotiation, the one that directly affects productivity levels (upwards or downwards) is the weighting coefficient. In effect, the level of the coefficient depends on the supervisor’s ability to justify his request for change, and hence on the balance of power between management and supervisor.

Secondly, the teams adopted different strategies in order to maximise their bonus payments. This is reflected in differences in their performance in respect of productivity gains, improvements in work quality and group dynamics. It is this finding that persuades us to contradict the majority of economists and argue that the same rule produces non-identical effects. This finding undermines the hypothesis that, by virtue of their homogenizing effect on behaviour, rules are one of the possible bridges between the micro and macroeconomic levels. We have shown that, on the contrary, the productivity rule and the rule system of which it is part produce heterogeneity. There is one fundamental reason for this, namely that the operatives make specific choices, taking into account factors such as their work organization habits, the strength of their involvement in their work, the degree of cohesion within the group, the amount of shared knowledge and their relations with the team supervisor. This latter also has a strategy to implement, based on his approach to managing the productivity bonus scheme. All this, and many other aspects as well, can be summarized in the term ‘team style’. This ‘style’ exists only as a collective phenomenon and cannot be reduced to individual behaviours or characteristics. The rules have different effects depending on the characteristics of the groups to which they are applied. This shows clearly that the knowledge held by those at whom rules are directed is an essential factor that economists should take into account in evaluating the consequences of rules once they are applied.

 The following section draws together the lessons of the various empirical analyses with a view to developing a practical theory of rules based essentially on the links between rules, routines and *habitus*.

## ***4. Habitus* and dispositions as the basis for strategies for applying rules**

 I argue that the differences of teams’ strategies can be attributed to the concept of *habitus* (Bourdieu 1977), i.e. the aptitudes or dispositions of individuals to adopt certain practices, as well as to the style of individual teams.

Firstly, *habitus* is a disposition to behave in a certain way that is not based on rational calculation. Indeed, the data support that the teams’ strategies are not the result of such a calculation.

Secondly, *habitus* is a disposition to behave in a certain way that takes account of past experience (Bourdieu, 1990). In 1999, seniority ranged from 7 to 15 years depending on the team. As a result, individual practices engendered by *habitus* are immediately comprehensible to the other employees. When a team is united not only by ties of friendship but also by trade union affiliation, past experience plays a major part in defining future strategies, without it always being necessary to discuss them, if only because certain strategic options can be eliminated straightaway for technical reasons specific to the team.

Thirdly, the deployment of team strategies within the context of the productivity bonus scheme, which makes discussion of the results obtained necessary and inevitable, further reinforces individual and collective *habitus*. Feldman and Rafaeli (2002) argue that organizational routines (which could also be denoted here by the term *habitus*) create connections between individuals. They provide the foundation for a shared understanding of the type of actions to be undertaken in a circumstance specific to a routine as well as of the choice of routine. Despite the highly individual nature of the work in the Workshop Métro, such connections have been established through the employees’ desire to share the problems they encounter in their work, the solutions found to specific repair problems, etc.The diversity of strategies deployed in confronting the same rule implies that certain hypotheses concerning individual behaviour are verified. We noted the credibility of the hypothesis that operatives compensate for the incompleteness of rules and the uncertainty surrounding their colleagues’ intention to cooperate by adopting routines. Actual individuals seem neither to have recourse to complex counterfactual anticipations, even though they draw on ‘interpretative’ hypotheses, nor simply to react to slight variations in a few collective parameters. Individuals compensate for their ignorance of the detail of the mechanisms of collective influences by drawing on existing rules that serve as frameworks for their interactions, even though they were intended to fulfil other functions. For example, operatives observe the way in which others attend to the debt sheet in order to gauge the degree of cooperation required of them. In doing so, they are compensating for the vagueness of those rules that have still to be interpreted by combining an acceptance of margins of tolerance with an ability to revise their own interpretations in case of failure. They are extremely tolerant when it comes to compatibility with observed facts and have at their disposal a few, limited procedures for revising their interpretations in the event of discrepancies. From this point of view, individual decisions are guided by a few salient items of information gleaned from the situation. Thus the notion of *habitus* explains why operatives trust their colleagues to follow the same strategy, albeit within the limits of an interval within which variations in colleagues’ work rates are tolerated. Consequently, the *rules operate within an interval in which individual strategies have no ambiguity*.

 Finally, the notion of *habitus* makes it possible to conceptualize the changes of strategies observed in the team over the period 1992-2000. *Habitus* – and this is also true of the notion of routine – can be said to contain its own transformative principle: as it mobilizes tacit and explicit knowledge, *habitus* transforms that knowledge (through processes of enrichment, modification, etc.) merely by virtue of the fact that the activity in question is going on. This knowledge in turn transforms the *habitus*, which explains why interpretations vary over time.

## **5. The meaning of rules emerges out of use**

A concluding paragraph brings together the lessons of the empirical analysis in order to develop a practical theory of the way in which rules operate, a theory based on the notion that a meaning of a rule lies in its uses. The transformation of the definition of labor productivity supports this theory. While uses reflect what is normal to do, practices depend on individuals’ *habitus* and dispositions to implement routines, which are nothing other than rules that have already been interpreted.

Figure 1. EK1: Evolution of labour productivity, debts and fault recurrence rates (1993-2000)

Note: debts and fault recurrence rates are plotted against the second Y axis (on the right)

Figure 2. EK3: Evolution of labour productivity, debt levels and fault recurrence rates (1993-2000)

Note : Debt levels and fault recurrence rates are plotted against the secondary Y axis.

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1. In September 2000, there were 162 employees: 8 managers, 35 supervisors, and 122 operatives. [↑](#footnote-ref-1)
2. The ‘store debt’ refers to the store of the logistics team. [↑](#footnote-ref-2)
3. The ‘Weighted Output Unit’ is the product of one intervention pondered by the ‘weighted coefficient’ of the team. [↑](#footnote-ref-3)
4. In each team, breakdowns are not equally difficult to repair: some are simple, other are complex. [↑](#footnote-ref-4)
5. However, an item could be ‘shipped’ only well after this period of 6 months, because lines often hold stocks of the different items during a period of over 6 months. [↑](#footnote-ref-5)