

The French system of training levies and the dynamics of the wage-earning relationship

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Introduction

Recent technological and organisational developments have highlighted the importance of human resource factors in the competitive performance of companies throughout the OECD. Moreover, in Europe, and more particularly in France, high unemployment is often accounted for by the lack of, or poor quality of, employee training. For these reasons, growing importance is attributed to both basic and further (or additional) training policies, whether they be public- or company-based.

France is in a distinctive position compared with other OECD countries regarding training and education. France's commitment to initial education, general or vocational, is comparatively strong. At present, some 42% of French youth between the ages of 17 and 24 are in school, a higher percentage than that of West Germany, the US or Japan (Verdier, 1993). However, the structure of the French school system has emphasised, until recent years, public investment in general education as opposed to employer-financed training in specific skills. Since the mid-1980s, though, policy initiatives have been adopted to increase the amount of specific vocational training offered and to revive traditional apprenticeships.

France is one of the few countries to have imposed on firms a legal obligation, through a 1971 law, to invest in employer training. Further training is also encouraged in France by a tax credit and institutionalisation of mandatory consultation with enterprise-level works councils. Such intervention in the labour market can be interpreted as a response to imperfections in the capital market and to the reluctance of firms to invest in transferrable skills. In this article I will offer another explanation, which emphasises the dynamics of the wage-earning relationship in France and the changing function of training policies in large firms at the end of the 1980s. Changing patterns of work organisation, notably the diffusion of 'lean production' methods, and the changing structure of the labour market have resulted in a redefinition of the place of employee training in the wage-earning relationship.

This article focuses on additional employee training. It starts with a brief description of the French institutional framework to help the reader understand the impact of further training on employees. This is followed by a section that outlines the 'societal' approach to industrial analysis, which allows us to understand the role of further training in the evolution of the wage-earning relationship, and proposes a micro-level model of company training practices. The third section uses this

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framework to analyse the diversity of the policies observed in France based on the author's case study work (see Appendix on methodology). Section 4 takes up the problem of the evolution of the French model of training at the macro-level, including the tensions and contradictions encountered in the current shift from one model to another.

1. Key features of the French system of additional training

1.1 *The legal context*

At the end of the 1960s, French firms undertook little if any expenditure for the training of their employees, which was almost exclusively funded through the national education system (Tanguy, 1985). Moreover, the rapid diffusion of scientific management methods after the war had dramatically increased the number of unskilled workers, as well as intermediate technical grades in peripheral production functions. These institutional and economic features account, in part, for the tendency of French companies to have underestimated at the time the importance of investing in workers skills and qualifications (Eyraud *et al.*, 1990).

The inadequate nature of the training system was reflected in recurring shortages of technical and scientific staff. Moreover, the French training system itself was linked by some employers to growing social tensions and strike waves of the early 1970s, which were heavily concentrated among the less skilled. Certain employers argued that the central role of the state in providing a general education contributed to problems of socializing employees to the norms of companies. It was in this context that the relevant social partners negotiated a national agreement on training, which formed the basis for the 1971 law. In principle, it reversed the responsibilities of firms and the state for providing further training.

Specifically, the 1971 law required firms to establish a budget for additional training linked to the size of the company's wage bill. However, it left the company free as to the precise manner in which the available funds would be used. This measure, which was controversial to begin with in imposing constraints on how companies could invest, can be interpreted as an effort to compensate for possible short-termism regarding employer investments in human capital, and as a means of avoiding the free-rider problems that can occur when firms invest in transferable skills. More than 20 years after the passage of this legislation, and in spite of significant opposition from the more conservative employer groups, the spending obligation remains intact and has even been increased, from 0.8% of the wage bill in 1971 to 1.2% in 1991, and 1.5% in 1993. A similar measure has recently been introduced for smaller companies (those with less than 10 employees), which initially were excluded from the legislation.

The quantitative impact of this measure is summarized in the following tables. They clearly show an increase in the spending on further training over the last 20 years, but with a marked difference according to the size of the company.

One can summarize the impact of this legislation as follows: it was significant for medium and large companies, but smaller firms have viewed the legal minimum as an upper rather than a lower limit. A second factor, which we will come back to, is that spending on further training has not increased linearly: at the end of the 1970s,

Table 1. *Training indicators, firms covered by the law of 1971*

Year	1974	1978	1982	1986	1990	1991
Number of employees (million)	10470	10050	9486	9277	9180	9210
Trainees (million)	1850	2004	2024	2460	3155	3322
Training hours (million)	115	122	113	119	150	157
Average training hours per employee	11	12	12	13	16	17
Training expenditures per employee (1)	1485	1888	2297	2830	3942	4112

(1) Constant francs, 1990.

Table 2. *Percentage of the wage bill spent on training according to the size of the firm (100=average 1974)*

Year	1974	1978	1982	1986	1990	1991
10-19	40	53	61	70	79	80
20-49	40	63	67	75	90	94
40-499	70	79	82	94	133	140
500-1999	89	102	11	137	196	204
>2000	159	174	188	234	306	314
average	100	112	120	143	190	196

amidst economic crisis and industrial restructuring, expenditure on further training reached a peak, while the numbers receiving such additional training dropped slightly. This sensitivity of training expenditures to company performance in the short run suggests that firms do not undertake training in order to anticipate or to achieve efficient restructuring. Thus, it is far from clear that training has been permanently integrated into human resource management in France.

1.2 the process of creating institutions

One of the most significant lessons of the French experience is that the legal obligation to provide further training went hand-in-hand with intense institution building. Management of the funds destined for further training led small and medium-sized firms (SMEs) to create 'Fonds d'Assurance Formation' (Training Insurance Funds) in certain industries and locales. These collective employer institutions collect individual company contributions, operate insurance systems, and establish common training policies for contributors at the local or sectorial level. At present some 94 Training Insurance Funds exist, involving some 90,000 private firms with more than 10 employees. They account for 8% of the total funds destined for training in France (while 31% are from companies having between 10 and 19 employees, 25% from those between 20 and 49, but only 2% from those with more than 2000 employees). The funds collected directly reimburse training expenditures undertaken by companies. However, the insurance rules also enable some companies to use rights of withdrawal superior to their payments. Finally, in

some industries (e.g., the building industry) part of the funds finance a sector-wide policy implemented by the Insurance Fund.

The increase in the training expenditures of companies, in combination with the increase in direct state expenditures (notably for policies to reduce unemployment), has resulted in a large demand for training institutions. Numerous additional training institutions have appeared within or alongside the public education system (e.g., in secondary colleges or universities), either under the aegis of employer organisations and associations such as Chambers of Commerce and Industry or, less often, that of profit-making organisations. Considerable growth in the supply side of the training machine undoubtedly has had a major impact. In 1991 nearly 5000 organisations (each with an annual turnover of at least 1 million French francs) accounted for 85% of the total transactions in this sector (33.5 billion francs). While it is common to refer to 'a market for further training' in order to underline the contractual and commercial nature of the relations between supplier organisations and companies, it must be noted that the majority of the suppliers are non-profit and a large number are institutionally linked to the companies through the local chamber of commerce, employer training associations, or training centres dependent on a particular company

1.3 Gradual integration of the training function in French firms

As noted above, during the 1960s French companies reduced their financial involvement in basic training. Numerous large companies that had centers for training apprentices (on a similar model to that of West Germany) closed them during this period. The legislation of 1971, by establishing an obligation to invest a fraction of the firm's wage bill and by introducing an obligation to consult with the enterprise works council in the process, promoted a progressive integration of the training function into French companies.

Initially, firms focused on their obligation to demonstrate to the administration that they had undertaken the required expenditures. Critics often charged that in practice the actual amount and content of training remained unchanged. But detailed empirical studies point to widespread institution building and the appearance of specialised personnel who are competent to analyse the firm's evolving needs in the area of work and qualifications. More recently, the work carried out by the more innovative large companies has encouraged some observers to speak of a 'strategic renewal' of the training function (Echevin, 1989). Training policy decisions in these companies are the responsibility of chief directors and are related to strategic decisions on product mix and sales. Training, as a component of overall human resources management, has slowly gained in importance in these companies through a process of learning and institution building culminating in increased autonomy for this function.

One cannot say, however, that the role of the unions in vocational training has similarly evolved. The legislation requires firms to consult with their enterprise works councils, which are dominated by unions, especially in large companies. Traditionally, French trade unions have viewed training (whether basic or further) as a public (state) responsibility, the guiding principles of which should be the social and cultural advancement of individuals rather than economic performance.

Thus, during the 1970s the unions hesitated to become actively involved in the institutionalisation of training programs at the firm level. This reticence often prompted the works council to restrict itself to simple acceptance or rejection of proposed management policy on the division of expenditure amongst various occupational categories, but with little positive input regarding the content or direction of training policies. It should be noted that the 'strategic renewal' of training did little to challenge the traditional hierarchical nature of decision-making in French firms. The more training became integrated into the firm's strategic options, the less were managers willing to involve unions in determining policy. The fact that the operational implementation of training is decentralised at the shop level did little to challenge this, because French unions are organisationally weak at this level for historical reasons which lie beyond the scope of this article.

2. A heterodox approach to understanding the position of training in the French firm

2.1 *Training and wage-earning relationship*

Human capital theory focuses on micro-decision making and explains the firm's commitment to employee training in terms of general versus specific training. But this approach has a number of well-known theoretical and empirical problems. On the one hand it is based on the hypothesis that a direct link exists between individual training, productivity, and wages. While there is empirical support for an interaction between training and the wage level, the explanation for this remains controversial. Furthermore, the existence of a wage differential linked to investments in specific training has not been empirically demonstrated. Moreover, the distinction between general and specific training itself appears blurred and often tautological. For example, the 'specific' character of training may derive more from the nature of the labour market than the type of training *per se*. The same training can be general in an occupational labour market and specific in an internal labour market because of the fact that competition is restricted to initial ports of entry into the firm.

Research focusing on an analysis of the 'wage-earning relationship' highlights the historical and social nature of the articulation between jobs and training. For example, it is difficult to understand the relatively stable nature of investments in general training undertaken by German firms without bearing in mind the occupational structure of the German labour market and the historical process which has institutionalised their distinctive apprenticeship system (Gehin and Méhaut, 1992)

Starting from a perspective that emphasises the historical and social nature of the wage-earning relationship, we propose a three-dimensional micro-level analysis of in-company training policies. This model, represented in Fig. 1, can be summarised by two hypotheses:

- (i) The wage-earning relationship is a set of social relations and institutions that are both created by and affect the behaviour of social actors. It is a network of social relationships which concerns not only the determination of wages, but also the distribution of employees among the jobs and the division and organisation of work (Boyer, 1986).
- (ii) There is a national and historical specificity to the wage-earning relationship which cannot be understood in terms of universal market mechanisms.

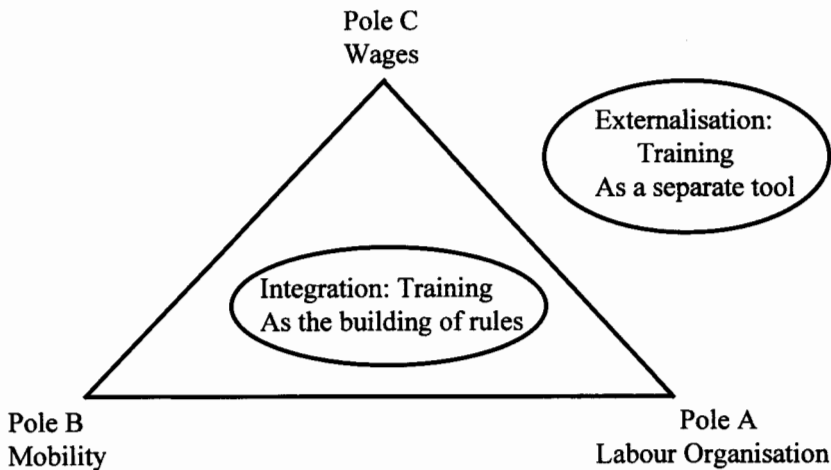


Fig. 1. Education, training, and labour force mobilisation.

The French 'regulation' school argues that attached to each historical stage of accumulation is a dominant pattern of the wage-earning relationship. Structural crises imply an evolution in the basic institutions, including major changes in the components and defining principles of the wage-earning relationship. For example, during the fordist post-war period in France through the mid-1970s, the coherence of wage-earning relationships was closely linked to a deepening of tayloristic work organisation and various institutional mechanisms that assured a close relationship between production and consumption norms. Such norms included stable contractual relationships between employer and employees in which seniority rules figured prominently, a relative stability of direct wages, and strong state intervention to provide various public goods including education and training and social security (Michon, 1992).

As the 'regulation' approach is mainly directed towards the macro-level, it does not usually develop in any detail the question of education and training. By contrast, the 'societal' or social approach associated with Maurice *et al.* (1986) mixes macro analysis with micro considerations of firm decision-making regarding education and training, which are seen as components of the age-earning relationship. For example, in their comparative analysis of Germany and France, they see national patterns of labour mobility, both individual and firm strategies, as being structured around occupational labour market rules in Germany and enterprise seniority rules in France. This difference is explained in part by the structure of each nation's system of education and training. Similar considerations are developed to account for differences in job organisation, with a 'qualification space' in the German case (e.g., the importance of the team structure allowing for internal apprenticeship and on-the-job training) and a contrasting 'hierarchical space' in France (less-cooperative relationships within and between teams).

These considerations provide the tools necessary to understand the great variety of educational training and retraining institutions and their ongoing dynamics.

While we use the 'regulationist' hypothesis of a dominant pattern in the wage-earning relationship for any nation at a given point in time, we draw on the insights of the 'societal' approach in moving from a macro to a micro analysis and in building a multi-dimensional analysis of work and employment relationships, including education and further training.

2.2. *A three-dimensional analysis*

For the management of the company, training may be regarded as:

(i) A tool with which to build (and change) job organisation and improve enterprise efficiency by providing the workforce with knowledge and ability according to the characteristics of their jobs and teams. This includes technical knowledge but also the ability to communicate with other workers in the team or with other teams. The relevance of training for job content and job organisation is determined by the characteristics of both the division of work and the training itself. General education and training is far away from pole *A* in Fig. 1. On-the-job training or apprenticeship is close to pole *A*. A strong tayloristic organisation of work does not promote interaction between work and training. New forms of work organisation are emerging, such as the autonomous team with no direct control, to strengthen these links.

(ii) A tool with which to organise the allocation of the workforce and to manage mobility flows. Training facilitates internal mobility by providing new skills and channelling the workforce into new jobs. It provides management with information on the competencies of the trainees. In this case too the 'distance' to a pole is a complex manner. When internal mobility is driven by seniority rules, training is seen as being far away from pole *B* in Fig. 1 below, and as being used only as an ex-post adjustment tool. When internal mobility is driven by job qualifications and/or by formal certifications and credentials, training acts as an internal principle for establishing mobility rules. Two similar positions on pole *A* therefore could have quite different meanings on pole *B*. Certain apprenticeship and on-the-job training systems limit mobility. In the opposite direction, occupational rules (such as those embodied in the German apprenticeship system) are closely linked to the rules of mobility. In general, the search for new kinds of flexibility probably implies a restructuring of both internal and external mobility rules and a more active role for education and training.

(iii) A component of wage policy. On the one hand, training (when paid for by the company) is a part of wage costs. On the other hand, it is a way of establishing a hierarchy among workers across the wage scale. Again, the distance from pole *C* is highly variable. In some organisations, there is a direct link between the level of training (or its evaluation through acquired qualifications) and wages. In others, the link is curtailed or non-existent.

Training should not, however, be considered only as a tool for human resource management. Not only is it an integral part of firm organisation training, it also serves a 'socialisation' function in which it contributes to shaping individual behaviour and a sense of belonging to a particular social or occupational group. Training incorporates individual know-how and produces not only technical competencies but also the ability to cooperate within groups and to identify oneself

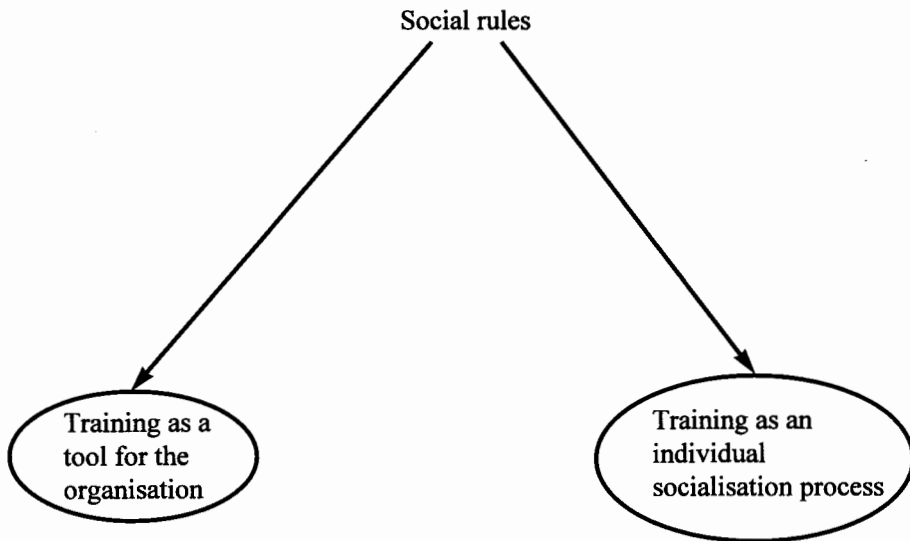


Fig. 2. *Continuing vocational training, organisation, and socialisation.*

with a group. Further, it creates individual 'projects' for mobility by shaping the possible mobility patterns of an employee.

This suggests the need to establish a relationship (see Fig. 2) between training as a tool for organisation and as a tool for the socialisation of individuals. The nature of this relationship is influenced by national education traditions and social rules.

It is not possible within the limited framework of this article to develop this latter point (but see Dubar, 1991), which discusses the use of training policies to affect patterns of group and individual behaviour). In the following sections, we will limit ourselves to analysing relations between further training and three components of the wage-earning relationships from the point of view of the company.

3. The evolution of the enterprise training policies

In light of the model sketched above it is possible to trace some central characteristics of the evolution of enterprise policies in France. We restrict ourselves here to a few comments on developments during the 1970s and an examination of the most significant changes which occurred during the 1990s.

3.1 *Small and medium-sized companies (SMEs)*

During the 1970s training was largely external to the various functions of the firm depicted in Fig. 1. That is to say, training was not used in shaping enterprise work organisation and it was not a factor in labour mobility and wage determination. In larger companies with well-institutionalised internal labour markets (e.g., steel or chemicals) we can observe an increase in their training efforts, though a less rapid increase than that observed in smaller companies. During this period training mainly concerned the more skilled categories (e.g., supervisors, technicians,

engineers, and management). More often than not, it was a question of undertaking training of a technical character, intended to complement basic qualifications, especially those required to introduce new technology. Frequently, this training was undertaken following an individual's promotion and was designed to reinforce the prior experience of the employee in question.

In large companies dominated by unskilled workers and classic taylorist organisation, we see that training was used for 'social' purposes. Faced with the legal obligation to spend, many companies set upon short-term training programmes, often on subjects unconnected with actual work content (e.g., car mechanics for unskilled men, needlework for women, or family budget management). This training was not intended to raise the qualifications of labour personnel in any significant way, and had no appreciable impact on mobility or wages. Such cases provide the foundation for many of the negative judgments made about the 1971 law, in particular that it created a financial obligation that lacked content and simply wasted resources. It must be emphasised however that from the point of view of human resource policies, such decisions were not necessarily irrational. Unable to offer career prospects to their employees and facing increased dissatisfaction over taylorist work organisation, such training policies enabled these companies to offer a release valve for worker discontent.

In small companies where training did not exist before the 1971 law, the legal obligation resulted in an apparent reduction in the difference between them and large firms. Yet training actually undertaken in the smaller firms was a source of concern for managers and company directors. It was very selective and lacked a longer-term vision of coherence. Furthermore, a number of small companies were content to pay their contributions into the insurance funds without ever exercising their right to draw upon them. These observations apply equally to the 1990s, as Delame and Kramarz (1993) have shown using panel data.

As a result, further training remained marginal and did not impact directly on the development of work organisation or labour mobility. This justifies speaking of a relative 'externalisation' of training at this time. The external character was reflected in the fact that during the economic recession of the second half of the 1970s, employer spending on training tended to stagnate. Industrial restructuring was achieved mainly through redundancies or early retirement, rather than through creative investment in training and new skills in accordance with changing technological and organisational conditions.

We can see here the limits of a measure which was designed for a growing economy but which ended up being applied during a period of crisis. However, the process of institutional building and organisational learning promoted by the legislation proved to be of considerable advantage to the French economy in the following decade, when the extent of the transformation of work organisation and skills became apparent.

3.2 The internalisation of training: three enterprise strategies at the end of the 1980s

The increase in training expenditures undertaken by large companies during the mid-1980s was part of a significant change in how firms used training. It coincided with the beginnings of a more profound technological and organisational

restructuring of French firms (Villeval, 1992), as well as with a further exposure of the French economy to international competition. Based on case studies of policies pursued by the most innovative of the large companies, the following tendencies are observed. (For a more complete presentation, see Méhaut, 1990).

General trends. The changing pattern of production organisation observed in the case studies can be summarised in three ways:

(i) A change occurred in technology in both the product and the production technologies (i.e., computerisation), with greater attention being given to the use-value of the goods, e.g., quality control, variability according to demand, and more significant consequences for job organisation, such as the development of teamwork and a closer relationship between maintenance and production activities.

(ii) A change occurred in the basis of productivity growth. While the reduction of direct production time remained a goal, more attention was given to the effective use of working time within the whole production cycle, e.g., the application of the 'zero stock' or 'just-in-time' production principle; preventive maintenance; and computerised management of production.

(iii) The firms emphasised a stricter control over employment levels. First, by analogy to the 'zero stock' production principle, one can speak of the 'zero stock' management principle as one of reducing the number of middle-level managers. Second, as internal flexibility became a major goal, there was a growing need for internal mobility in accordance with variations in the quantity of work within the whole production process.

In terms of the policy consequences, three main groups of training policies can be isolated. Before going into them, however, it is important to point out certain general trends. In each case, the level of expenditure for training more than doubled. Four of the firms studied are now spending more than 6% of their wage bills on corporate training. If we take a broader definition of training than in the French legal framework and include less formal programmes such as on-the-job training and training within quality circles, the figure is closer to 8%.

There was also a significant transformation in the management of training plans. On the one hand, decisions about training are increasingly made at the top levels of the firm and in relation with overall firm strategy. On the other hand, concrete decisions about training are decentralised at lower levels. For example, trainers may be technicians, foremen, or even skilled workers. Another characteristic is the shift from short-term to medium or even long-term training plans.

A complex relationship between training and working time has emerged. Previously in France, due to the legal framework and union demands, training time was mostly included in total working time, even though it occurred off-the-job. Now, as training is increasingly linked to the nature of the employee's job, the time devoted to training tends to be divided between paid working time and leisure time, e.g., evening courses.

Training policies for workforce mobilisation. This first group of policies (see Fig. 3) is often designed to shape attitudes and behaviour at the work place. It consists of a mix of short formal courses on technical issues such as quality control, on-the-job

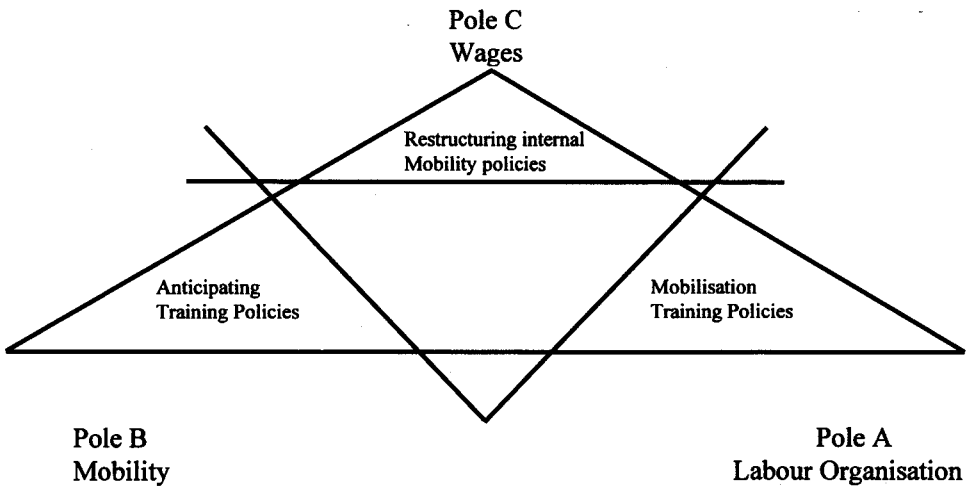


Fig. 3. The relationship between continuing training policies and labour force mobilisation.

training, visits to other departments of the company, and team meetings to analyse and redesign work organisation. It concerns large numbers of workers, sometimes even all shop floor employees, including unskilled, skilled, technicians, and foremen. Its content is largely defined by the training department within the company and undertaken by the firm's own training staff.

While it might seem that such training amounts largely to a revival of on-the-job training programmes, it goes beyond this in that it concerns not only the job but also the general organisation of the department or the company and also aims to change work organisation. This amounts to an enlargement of the job content, directed at learning new techniques, such as the ability to perform basic maintenance and quality control but also the ability to cooperate within the team and to communicate with other teams.

This kind of policy is located close to pole *A* in Fig. 3. It includes issues relating to the horizontal mobilisation of employees through multi-skilling and their ability to rotate from one job to another. Eventually, it calls for the entire team to be displaced along the production line according to the requirements of flexible work organisation. However, its relationship to the wage structure remains limited. Usually there is no change in the nature of wage determination. At the most, such policies are associated with a slight increase in the level of team wages as a reward for multi-skilling.

Upgrading skill levels to anticipate change. This sort of policy can be seen as the opposite of that discussed above. It concerns primarily semi-skilled or skilled workers who have low levels of formal education and no basic vocational training, due to their age bracket. The aim of such policies is to change their skill and aptitudes in an effort to avoid or postpone layoffs. Often the company wants to obtain greater internal flexibility by breaking down established divisions of labour, creating new team organisations, and compressing the number of hierarchical

grades. Such policies are linked to market strategies based on introducing technical innovations to the product. They are seen as part of a general process of change, without precise expectations as to its timing and the ultimate form of the job structure.

This training strategy puts considerable emphasis on basic knowledge such as communication skills or mathematics, or on basic technical skills in mechanics, electricity, or automation. Course structure resembles an academic curriculum and some teachers and trainers are hired from outside training centres, including public programmes. Course completion often results in a state-certified qualification. The goal of the training is to change the firms overall skill structure, so admission to courses is not selective. They are designed for all workers in a shop or department, although participation is voluntary. Selection occurs at the end of the course, therefore those who fail probably face ultimate dismissal.

This type of training has significant consequences for work organisation, internal mobility, and wage structure. It implies a general process of upgrading and a shift towards a wage structure based increasingly on training considerations, even where the relationship between job and training content is weak. Training is clearly designed to anticipate changing patterns and establish new ones affecting internal mobility and wages. Choices regarding a new work organisation depend on the success of the training policy and on opportunities it provides. In this sense, training policy therefore is located close to poles *B* and *C* in Fig. 3 but rather distant from pole *A*.

Training for the restructuring of internal mobility. If we consider the formal course structure involved in this type of training policy, it appears to be close to the previous structure. Formal courses are offered that end in state-certified qualification and a large component of general and theoretical knowledge. But it has other characteristics as well. It does not draw inspiration from external scholastic curricula but is closely tailored to the firm's needs. It aims to link specific company requirements with individual worker skills and experience. In this sense training aims to develop a firm-specific knowledge and know-how, including evaluation of the worker's particular competencies.

The training is designed to accompany the process of change, and is a part of the changing pattern of job organisation and firm mobility structure. Workers are screened for this training by means of skill evaluations and tests. Enrolment in such courses is accompanied by or quickly results in promotion to higher-classified jobs. The issue of internal mobility is very important because the aim is to change traditional patterns of mobility. Evolving job descriptions and associated wage determination rules clearly incorporate the characteristics and training specifications of individual employees.

The new organisational structure parallels the new training programme. Training enhances the integration of general academic knowledge with internal competencies, combining various abstract topics with actual worker experiences on the job. It is the clearest case of an organic integration of training with the three dimensions of the model, the creation of what might be called a 'learning organisation'. This kind of training policy is located at the centre of Fig. 3.

4. From micro to macro: tendencies and contradictions in the emergence of a new model

All three of the types of training policies discussed above have, to varying degrees, a common consequence: the embodiment of training in the formulation of organisational rules. In the case of the first policy type discussed, job organisation, rules of multi-skilling, and internal functioning of teams are partly defined during and by the training sessions, by the trainees themselves. In the second and third cases, training acts as a catalyst for job restructuring. It is a way of defining mobility channels and selecting individuals for these channels. It also contributes to an individualisation of the wage structure.

In all cases, one goal is to modify worker behaviour and attitude, as required by changes in hierarchical organisation and control of production tasks. There is a shift from hierarchical control over workers with strict definitions of individual tasks, towards a decentralisation of responsibility in teams that are free to choose ways of achieving predefined goals.

These micro-level trends basically concern large innovative companies. They constitute the makings of a new relationship of the firm to further training. However, as Feutrie and Verdier (1992) emphasise, it remains an 'unfinished social construction' for two reasons. First, it is unfinished in that at the micro level these new training principles are still only partially implemented. To illustrate, despite an ongoing learning process, the position of training in French firms remains fragile. Given the traditional situation in which technical services and engineers dominate in French firms, introduction of major technological and organisational changes is often governed by a 'technical' logic in which the human resource division is used to effect ex post-adjustments rather than shape the overall process of change.

Second, a number of companies are torn between conflicting logics or principles for managing internal mobility. On the one hand, the legacy of internal labour markets based on the seniority principle may weigh against the importance of further training in setting criteria for promotion. On the other hand, the principle of relying on external recruitment at all levels raises the possibility of constructing additional occupational labour markets. This also raises important questions concerning the relation of basic training to further training and the relative weight of externally acquired certificates or diplomas and firm specific training and skills in determining wages.

The unfinished nature of the changes makes clear that what is at stake is the emergence of a new type of wage-earning relationship, in which the occupational dimension (for both the vocational training system and the labour market structure) becomes dominant. But the shift to such a model requires that more attention be given to the evolution of initial training and that greater importance be granted to vocational training in general. It requires a new articulation between training and access to employment (e.g., development of combined on- and off-the-job training), as well as the strengthening of occupational-based rules of mobility outside the firm. It requires the firm to give more recognition to diplomas and to shift from the evaluation of job posts to the evaluation of individuals. While there is evidence of a move in this direction, the process clearly remains unfinished.

Conclusion

In assessing the French experience we must stress certain points. First, considerable time was required to carry out the institutional transformation and learning processes that the actors have had to undergo. There was always a risk of being left with a body of training legislation empty of real content at the work place, given the radical nature of the changes intended. One can estimate that at least a decade was needed before the new legal obligations in France had any significant impact within the average firm. Acceptance of this progressive and gradual institutionalisation was probably a necessary condition to gain employer involvement and achieve the present level of success.

If we reflect on the institution-building process in France, it is clear that legal requirements contributed to the development of the human resource functions within the company, in part because they reinforced the role of professional and collective organisations in ways that created a meeting place for the different partners in the productive process and enabled them to discuss and build the appropriate training 'machine'. We find in this progressive institutional construction an element which is a key in the German system, where consensus over the value of apprenticeship is inseparable from the role played by the works councils at the firm level, the Chambers of Commerce and Industry at the community level, and by the different tripartite bodies at the national level. In the area of education and training, the role of the various institutions thus is undoubtedly as crucial to education and training as is the simple question of financing (also see McNabb and Whitfield, 1994).

Bibliography

- Auer, P. 1994. Further education and training for the employed: systems and outcomes, in Schmid (ed.), *Labour Market Institutions in Europe*, New York, M.E. Sharpe
- Boyer, R. 1986. La théorie de la régulation, une analyse critique, Paris, *La Découverte*
- Delame, E. and Kramarz, F. 1993. *Entreprises et formation continue*, Paris, INSEE
- Dubar, C. 1991. *La socialisation. Construction de identités sociales et professionnelles*, Paris, Armand Colin
- Echevin, C. 1989. Vers une remontée stratégique de la formation? in Bel, Casiagnos, Echevin and Giraud-Heraud (eds), *Production et Usage de la Formation par et dans l'Enterprise*, Paris, CNRS-PIRTTEM
- Eyraud, F., Marsden, D. and Silvestre, J.-J. 1990. Marché professionnel et marché interne en Grande Bretagne et en France. *Revue Internationale du Travail*, vol. 129, no. 4
- Feutrie, M. and Verdier, E. 1993. Entreprises et formations qualifiantes, une construction sociale inachevée. *Sociologie du Travail*, 469-492
- Gehin, J. and Méhaut, P. 1992. *Apprentissage ou formation continue? Stratégies éducatives des entreprises en France et en RFA*, Paris, L'Harmattan
- Marsden, D. 1990. Institutions and labour mobility: occupational and internal labour markets in Britain, France, Italy and West Germany, in Brunetta and Dell'aringa (eds), *Labour Relations and Economic Performance*, London, Macmillan
- Maurice, M., Sellier, F. and Silvestre, J. 1986. *The Social Foundations of Industrial Power: A Comparison Between France and Germany*, Cambridge, MIT Press
- McNabb, R. and Whitfield, K. 1994. Market failure, institutional structure and skill formation, *International Journal of Manpower*, vol. 16, no. 5
- Méhaut, P. 1989. New firm's training policies and changes in the wage-earning relationship, *Labour and Society*, vol. 13, no. 4

- Michon, F. 1992. Institutional forms of work and employment, in Castro, Méhaut and Rubery (eds), *International Integration and Labour Market Organisation*, London, Academic Press
- Rose, M. 1985. Universalism, culturalism and the Aix group: promise and problems of a societal approach to economic institutions. *European Sociological Review*, vol. 1
- Stankiewicz, F. 1994. Pourquoi les entreprises financent-elles de la formation général? Essai d'analyse d'une hérésie, Centre d'Etudes et de Recherche Sociologiques et Economiques, Université de Lille, CNRS
- Streeck, W. 1991. On the institutional conditions of diversified quality production, in Matzner and Streeck (eds), *Beyond Keynesianism: The Socio-Economics of Production and Full Employment*, Aldershot, UK, Edward Elgar
- Tangy L. 1985. Enseignement général, enseignement technique, intégration et hiérarchie, L'échec scolaire, Paris, éditions du CNRS
- Verdier, E. 1993. Educational investment and employment in France, the increasing cost of adjustment in the 1980s, paper for the conference 'Human Capital Investments and Economic Performance', Santa Barbara
- Verdier, E. 1994. Training and enterprise in France, *International Journal of Manpower*, vol. 15, no. 5
- Villeval, M. 1992. The workforce reconversion in the crisis of fordism: element of break-up or element of transition, *International Contributions to Labour Studies*, vol. 2

Appendix

Methodology

The paper is based on the analysis of data from official surveys on training and on the author's monographs investigating individual firm training policies. The data for Tables 1 and 2 comes from the annual official reports that all French firms with more than 10 employees make to the fiscal administration. They are required to report their total expenditures on employee further training, as well as certain physical indicators including the number of hours and number of trainees. The definition of training excludes on-the-job training. Only formal courses (in training centres) and certain forms of organised on-the-job training (with training not during paid working time) are included.

For the case studies discussed in Section 3, a two-step methodology was used. In the first, an analysis of the managerial literature was conducted (about one hundred articles from professional newspapers in the field of human resource management). This led to an initial classification of ongoing innovations in training. A sample of 16 large innovative firms was then investigated at all levels: top management, human resource and training officers, workshop foremen, and some workers. Both qualitative and quantitative information was gathered on technology, work organisation, decisions on training policies, and kinds of courses, mobility, and wages. The 16 firms belong to different industries: chemical, electronic, mechanical, and mail order firms. The staff at the plant level numbered between 400 and 2000 employees.