

Human resource development in the United States and Germany

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The flexible allocation of a well-trained work force is broadly recognised as an important precondition for competing successfully in international markets (Finegold and Soskice, 1988; Mahnkopf, 1990; Campbell, 1989; Walton, 1985; Piore and Sabel, 1984; Kern and Schumann, 1985; Kochan *et al.*, 1986). Human resource policies emphasising broad skills are associated with the production of high quality goods and services produced at high levels of productivity (MacDuffie and Krafcik, 1991; Kochan and Osterman, 1990; Osterman, 1993). This paper compares enterprise-level further training in the US and Germany to explore how institutions structuring employment relations affect employer investments in the skills of their human resources.¹

The systems of employment relations in Germany and the US consist of sets of actors and institutions—unions, works councils, employers, employer associations, chambers of commerce (and industry) public training institutions, and so on—that influence many aspects of the employment relationship. The determination of wages, the organisation of work, the training of workers, and the manner in which employer and employee interests are organised are all part of an employment relations system. The relationship between the pieces of an employment relations system can vary sharply across countries. In particular, the German and American systems differ in the sorts of incentives they create for the parties with regard to the quantity and quality of the training they offer their work forces.

Certain central limitations of the US system of employment relations are highlighted by the contrast to Germany. We argue that these limitations reflect the lack of an institutional framework or infrastructure within which labour, business and the government can negotiate and co-ordinate their respective interests in human resource development.² One key component of such an infrastructure is the institutionalisation of independent, collective employee voice in management

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¹By 'further training' we mean training that builds on employees' skills, as distinguished from 'retraining' which shifts workers from one area of expertise to another.

²'Infrastructure' refers to economy-wide systems of institutions and the incentive structures which underpin them (Soskice, 1991).

decision-making about training. American unions represent only about 15% of the work force, and there is no supplementary representative body (such as European-style enterprise-level works councils) to aggregate and articulate workers' interests and needs. Yet by reducing asymmetries in the information held by workers and management about the work place, formal worker representation mechanisms like these can have positive efficiency effects (Freeman and Lazear, 1992; Freeman and Rogers, 1993; Eaton and Voos, 1992; Levine and Tyson, 1990; Smith, 1991). A second key aspect of a highly developed institutional infrastructure is the existence of mechanisms that can take some of the costs of human resource development out of competition, for instance, through centralised bargaining or employer consortia. In the United States, there are no such mechanisms for the vast majority of companies. This substantially increases the risks facing firms that invest in general skills which could be of use to competitors, should their employees choose to change jobs. We argue that these two features of the US employment relations system reduce both the amount and the potential effectiveness of investments in training, and therefore the competitiveness of the US economy.

In this paper we outline the differences in the employment systems, review the extent and nature of further training in the US and Germany, and examine two cases from each country which illustrate how institutional contexts can influence human resource development strategies and outcomes. While every system of employment relations is the product of a peculiar history and politics, it is nonetheless possible to extract a few key principles from the German system of employment relations that can be adapted to support and encourage more training, and general skills training in the US. We will argue that US practitioners and policy makers must find ways to encourage labour and management to promote further training in broad skills linked with production strategies that target high quality goods and services. Specifically, we develop two broad policy recommendations based on principles underlying the German model. First, we argue for introducing employees' long-term career and employment security interests into decision-making processes about training via enterprise-level employee councils. Second, in order to reduce inequities in the extent of employers' investments in training we suggest measures to take some of the costs of such investments out of competition among employers. Both recommendations are loosely patterned on the German system.

Employment relations in Germany and the US

In Germany various institutional mechanisms for defining and articulating employee interests at different levels of the economy tend to encourage investments in human resources. All matters of substantive concern to labour and management are defined and debated at the national level by the 'social partners' (the sixteen large industrial unions and the employer associations); negotiated in contract language at the regional and industry level (in annual bargaining rounds between the unions' regional bodies and the regional employer associations);¹ and then

¹There are some cases where collective bargaining takes place at the firm level. Volkswagen is an example. However, most of the economy is covered by regional, industrywide contracts.

implemented by works councils (often with the strong support and guidance of the unions) and management at the enterprise, plant and/or work place level. Local innovations can be developed and conducted consciously within the framework of centrally determined employer and union strategies. The actors and institutions involved are linked by a loose regulatory framework established by the government, which encourages the parties to negotiate over changes in the form and substance of their relations (Wever and Allen, 1993). Centralised collective bargaining creates relatively uniform wages across industries and sectors, especially in comparison with the US (Sengenberger, 1988; Bell and Freeman, 1986).¹ Furthermore, collective agreements apply to all member firms of the employer association of a given industry, and often are extended by the government to nonmember companies as well. This takes many of the costs of labour out of competition and encourages firms to pursue high wage, high labour-value-added production strategies (Sorge and Streeck, 1988). Such a strategy necessarily elevates employee skills to a position of high priority on the employers' agenda.²

In addition to collective bargaining over wages and working conditions, German unions engage in training initiatives and actively empower works councils with information on new forms of work organisation and related skills issues. In an effort to upgrade the skills of their members, many individual unions develop and deliver training programmes at their headquarters, special training centres and regional offices. Particularly sophisticated further training policies have been developed by the Metalworkers Union, the Service Union and the Chemicalworkers Union. The unions and their federation, the D.G.B., also run technology consulting centres to provide assistance to works councils collaborating with management to introduce new technologies. Seminars and classes educate local employee interest representatives about how to think about training and further training, and how to ensure that it be conducted in the long-term interests of their members (e.g. preventing redundancies, protecting disadvantaged workers, etc.). The unions and research organisations close to them regularly publish studies and guides providing training examples, models and strategies for works councils.³

Employer associations and chambers of industry and commerce are also centralised. These organisations work to ensure that employee skills be of high quality and

¹Wage flexibility is possible through negotiations between the works council and management at the company level over wage supplements. Wage increases supplementing the collective agreement are common, especially in large firms that have extensive internal wage structures. However, employer associations and unions closely monitor these wage supplements to ensure they do not undermine the solidarity of their members.

²Conflict between the metalworkers union and the employer association over the extent and pace of wage increases in the relatively unproductive former East Germany essentially amount to disagreements about the extent to which wage bargaining can or should remain centralised. Ultimately, both the unions and employers share an interest in protecting this system, since it allows both sides to expend resources on long-term strategies rather than short-term economic struggles. (See, for example, Thelen, 1991; Turner, 1991; Silvia, 1993; Gellner, 1992.)

³Examples of such works include a survey of works councils in the electrical industry to determine the extent and nature of further training from the standpoint of local employee representatives (Hans Boeckler Stiftung, 1990); a survey and summary of workplace agreements regulating further training provisions across industrial sectors (Hans Boeckler Stiftung, 1989); analysis and prescriptions arising from a study of further training pilot projects conducted in various metal working plants and workplaces between 1986 and 1989 (Dybowski *et al.*, 1990); and books offering practical advice on how works councils can approach various training related issues (Heimann and Kuda, 1989).

nationally standardised, and that the cost of training be to some extent equalised across companies. Peak associations act as consultants to their members, much like the unions do for the councils. The research institute of the Federation of German Employer Associations (the B.D.A.), and the I.W., publish a regular stream of research on the costs of, justifications for and various case studies on further training (Schlaffke and Weiss, 1990; Weiss, 1990; Andresen *et al.*, 1990; Faix *et al.*, 1989; Goebel and Schlaffke, 1987; B.D.I./B.D.A./I.W., 1990; I.A.O.-E./I.W., 1988). At the industry level, joint bodies such as the chemical industry's Occupational Development Council—including the union and the employer association—help articulate supra-enterprise level interests. Chambers of industry and commerce support regional training centres through their membership fees, thus reducing the costs of training to small and medium-sized firms. Because membership is compulsory the costs of financing these efforts is equalised across enterprises. Training consortia among small and medium-sized firms also allow companies to engage in training they would otherwise be unable to afford (Siehlmann, 1988:15, 33; see also Gaugler and Schlaffke, 1989:17ff.; Gesamtmetall, 1989).

In the United States, employment relations are more decentralised and characterised by more experimentation and change. Where there are unions, collective bargaining typically occurs at the company level. US unions are less encompassing than the German unions (which represent workers from several industries within broad sectors of the economy). Co-ordination of bargaining across workplaces exists primarily in industries like steel or autos, where one industrial union represents most employees. Jurisdictional conflicts between crafts and even between non-craft unions competing to save jobs or to represent the same bargaining units limit union co-operation.¹ Compared to the German labour movement, US unions have not generated much research about the kinds of technologies and associated changes in work and production organisation, and ultimately skills, that employers are likely to introduce in the future. This makes it difficult for them to anticipate the skill needs of their members, or to articulate a broad training strategy.

Business interests are also decentralised in the US. Company or plant-level collective bargaining makes it difficult for individual employers to pursue high wage, high labour-value-added production strategies because of the risks that competitors may undercut this higher wage position, or pirate away trained employees before the full return on skill investments has been realised. Because investment in worker skills is risky, company-specific skills are often favoured over the sorts of broad skills that are associated with internationally competitive high performance work systems (Osterman, 1993; Berg, 1993; Sorge and Streeck, 1988).

Training co-ordination among employers or unions in the US is rare. While joint labour-management experiments with further training are in some cases extremely impressive, they are not widespread. Because they are not systematically supported by industry, corporate or union strategies or by the government, they remain

¹A bargaining unit is defined by the National Labor Relations Board, created by the National Labor Relations Act, which (as amended) remains the centrepiece of American labour law. Normally a unit covers all or most nonsupervisory personnel at a given workplace.

The A.F.L.-C.I.O., conscious of the problems with rivalries among member unions, has engineered several mergers in recent years and has made the reduction of such rivalries a top priority.

hostage to short-term market vagaries and individual personalities filling key local positions. They lack a durable institutional life of their own.

Employee training in Germany and the US¹

In Germany the majority of the work force has received two to three years of vocational training, so 'further' training is generally above and beyond fairly extensive initial training. In general, more German firms offer their employees further training than American companies.² A 1990 survey by the I.W. found that over 90% of German companies in all size categories offer some further training (Weiss, 1990:70). By contrast, a recent study commissioned by the US Department of Labor (D.o.L.) (Knoke *et al.*, 1993) found that less than a quarter of American companies offer formal training to their employees.³ However, the 22% of American firms that do offer formal training account for over two-thirds of the work force. But because of the lack of a widely used apprenticeship system some 'further training' offered by US employers probably entails relatively low level skills, compared to their German counterparts. Researchers in Germany have found that training is more concentrated in services and among white-collar workers than in manufacturing and among blue-collar workers (Bahnmüller *et al.*, 1991).

Data on sectoral differences in the US are less clear, but the D.o.L. study also suggests that there is relatively less training in manufacturing than in other industries, and considerably more training for managerial than non-managerial personnel. A 1989 survey by the American Society for Human Resource Management (S.H.R.M.) also found most further training to be geared toward managerial and supervisory personnel (S.H.R.M., 1989:7). The 1990 survey by the I.W. found that management training was offered by 42% of responding organisations, but eight other kinds of training were offered by between 45% and 63% (Weiss, 1990: 92-93). (The relatively greater amount of non-managerial training in Germany is no doubt connected to the fact that in the 1980s the unions made further training one of their key bargaining issues.)

Training in Germany (including vocational training) tends to be fairly general in orientation, imparting skills that employees could use at a variety of workplaces, while in the US training tends to be more company or technology-specific (Berg, 1993; Jürgens *et al.*, 1989). The distinction is important because it is broad, general skills that are linked to firm competitiveness. The German orientation toward general training begins with initial training through the vocational education system. The unions, works councils, employers and employer associations are all involved in the vocational training system. Almost three-quarters of a given cohort enters an apprenticeship for typically two to three and one-half years, spending usually about two days a week in school and the remaining time at the workplace. National

¹Below, we use the term 'further training' to mean training beyond initial or vocational training. In the U.S., the term 'company training' has a similar meaning, but in Germany vocational training is substantially company based, and therefore the term 'company training' is more inclusive than we mean to be.

²An excellent guide to further training activities in Germany is I.W. and S.O.F.I. (1990).

³This study is based on the 1991 National Survey of Organizations. There were 1517 companies responding from a sample of public and private sector organisations; 45-minute interviews were conducted with personnel directors or owners at 727 of these companies (Knoke *et al.*, 1993).

standards ensure the uniformly high quality of skills.¹ Local quasi-public chambers of industry and commerce and craft chambers ensure these standards are followed, determine the suitability of firms for providing training, monitor the training contracts of firms, advise firms on how to improve their training, arbitrate conflicts between apprentices and firms, administer final competency exams for apprentices, and support external training centres and consortia for small and medium-sized firms (see Streeck *et al.*, 1987). The legal employment security enjoyed by German workers restricts external flexibility as a means of adjusting to economic fluctuation and instead encourages firms to compete on a non-price basis through a highly trained work force and internal flexibility (Sorge and Streeck, 1988; Büchtemann, 1991; Streeck, 1990). This constraint on external labour market flexibility encourages German companies to invest in skills that can be applied in a variety of jobs within the internal labour market.

Training in the US—beginning with vocational education—appears to focus more on conveying narrow job or company-specific skills. US vocational education is primarily school-based. Unlike in Germany there is no standardised curriculum, common set of standards or certification process for secondary vocational education. Therefore, the content and quality of vocational education vary a great deal across schools and states. Only about half of the states set minimum hours of instruction requirements for all vocational training categories, and fewer than half set a minimum sequence of courses for all categories (US Dept. of Education, 1988:16; see also Grubb, 1984; Jacobs, 1989; Hamilton, 1990).² Moreover, US secondary and post-secondary vocational education is not able to provide its graduates with particularly good employment or occupational status (Kang and Bishop, 1984; Bishop, 1988; Grasso and Shea, 1979; Wilms, 1975; Breneman and Nelson, 1981; Monk-Turner, 1983). Decreasing numbers of students have been enrolling in post-secondary vocational training since 1982 (Kochan and Osterman, 1990). Vocational education does not appear to be valued very highly by firms in the US. There is no explicit, formal involvement of business (or labour) representatives in the school-based portion of the training system at the national, state, or local level. Current industrial apprenticeship programmes in the US cover a very small and declining proportion of new entrants into the labour force. Only 3% of a given cohort of school-leavers in the US takes an apprenticeship, as compared to 66%–75% in Germany (Lynch, 1990; Müller-Jentsch, 1992).

Taylorist labour–management relations in the US, centering on ‘job control’, reinforce the bias toward narrow skills. Job control unionism is characterised by a detailed ordering of job classifications linked to a wage scale and rules surrounding seniority rights. This system is entrenched in most US manufacturing industries, essentially constraining internal labour market flexibility. The job control system provides an implicit form of employment security through employees’ positions within the internal hierarchy of jobs. In the event of an economic downturn or technological change, those with the most seniority are last to be laid off. Because

¹For an in-depth overview of the history of the ‘dual system’ and its reforms, see Stratmann and Schlöser (1990).

²Vocational education in the US is officially divided into six categories: agriculture, distributive/marketing, business education, trades and industries, health, and occupational home economics.

of the few legal restrictions on hiring and firing workers and the lack of wage solidarity across and within industries, firms are encouraged to obtain workers through the external labour market rather than invest in the skills of their incumbent work force. Thus, even where internal labour markets are developed in the US—like in unionised companies—they are not necessarily associated with broadly applicable skills.

Katz and Keefe (1991) examined unionised companies and found an increase in non-technical training in broad problem-solving and communications skills in recent years. This finding is consistent with the D.o.L. study's conclusion that in the US companies with relatively formal internal labour markets and job structures (associated with unionised settings) tend to provide more training and to train more employees (Knoke *et al.*, 1993:44–49). It would also explain the generally higher level of company training in Germany, where most employees are represented by works councils which—like American unions—encourage the formation of internal labour markets. In sum, US companies provide their employees with less initial and further training than German companies; they offer relatively more training opportunities to their managers; and they focus training efforts on relatively narrow or company-specific skills. We now turn to several cases which elaborate on and help to explain these differences.

Skills development in practice: Volkswagen and German Digital Equipment Corporation

The ability of German labour to play an active role in developing and implementing training and further training strategies hinges on the symbiotic relationship between the unions and the councils. In the examples that follow, new training-related experiments and programmes are developed jointly by the council and the union, and their co-operation directly benefits both organisations. These examples also show how the unions, in their capacity as industry/region-wide co-ordinators of enterprise-level labour strategies, are able to help diffuse organisational and training innovations and spread the costs of training across companies.

Volkswagen

The 1987 technology agreement between Volkswagen (V.W.) and the metal working union, I.G. Metall (a rare enterprise-specific contract), is especially impressive because of the union's and the works council's efforts to define training needs independently of management's technology-driven requirements.¹ The 1987 contract between V.W. and the I.G. Metall was one of the first collective bargaining agreements explicitly to address the issue of further training (c.f. Kakalick, 1989;

¹This agreement was achieved with the financial support of the Research Institute for Employee Development (*Forschungsinstitut für Arbeiterbildung*), and was financed in part by V.W.'s central personnel department and in part by a federal grant to the I.G. Metall. The Labor Ministries are required by law to promote employee development, including further training. They typically carry a large portion of the financial responsibility for further training associated with large-scale reorganisation and restructuring projects to prevent mass lay-offs (Bosch, 1990). This activist role by the federal government has been an important force in Germany, empowering both labour and management to find innovative solutions to human resource problems.

Lacher *et al.*, 1987; Bahn Müller *et al.*, 1991). The thrust of the union's strategy was to involve the employees in decisions about how rationalisation would take place, how new technologies would be introduced, and how consequent changes in skills would be dealt with. Concretely, this meant that the works council receives information about changes in production and work organisation before they are introduced, and is in a position to develop alternative plans and/or to bargain over the terms of change.

As early as four years prior to the formalisation of a collective bargaining agreement the works council at the V.W. transmission plant in Kassel took an active part in structuring technology-driven skills changes. The Kassel plant employs about 20,000 mostly blue-collar workers, who produce about 10,000 transmissions every day. The introduction of N.C. machine tools and a Manufacturing Resource Planning system in the early 1980s led to a need for a 50% work force reduction as well as a series of dramatic changes in skills. The jobs that would be lost were mainly manual, low-skilled jobs; in the meantime more people would be needed to fill certain higher skilled occupations.

Having been informed of management's planned changes in advance, the council developed a further training programme designed specifically to protect jobs through upskilling, and to prevent the polarisation of the work force into so-called rationalisation 'winners' and 'losers' by ensuring that lower skilled workers whose jobs were to become redundant were granted broad training to allow them to perform a variety of new jobs (Kern and Schumann, 1985). In particular, the council's training package provided workers with a broad understanding of the new technological systems and how these systems fit into the overall production system at Volkswagen. Specific technical skills were learned only after a course of general training was completed. Management at first resisted this, but over time this attitude seemed to change. As the head of the works council's training committee put it:

Though at the beginning we had considerable conflicts with top management . . . in the meantime there has been a change in how they value this [part of the training]. . . . Now this is seen even by top management as the most important . . . because this part of the training develops . . . the basic foundation for [workers'] motivation [to participate in the further training in the first place] and their confidence in the rest of the programme (Kakalick, 1989:398; our translation).

Because the I.G. Metall represents employees at establishments throughout the metal working industries, it was able to carry the lessons of the innovations at V.W. to other enterprises. Further training costs are to some extent equalised across employers through industrywide collective bargaining at the regional level. The diffusion of new ways of organising training was aided significantly by the union's ambitious 1988 Nordwürttemberg/Nordbaden collective bargaining contract with the employer association (Gesamtmetall). Spearheaded by one of the most activist and forward thinking offices of the I.G. Metall, the contract is to 'make possible the deployment of human resources in multiple areas, as well as furthering the maintenance and broadening of employees' existing qualifications' (Bispinck, 1990:17). The contract requires employers to meet with their works

councils at least once a year to discuss projected technological and organisational changes. It requires that the skills-related interests of employees as well as the employer are to be considered in the development of training and further training programmes. The goal of these training measures is to impart skills that would allow employees to perform jobs that pay the same as or more than their current jobs. Employees who are deployed to use their new skills receive a pay increase of at least 3%. Training occurs on company time or employees receive overtime pay for time spent in training. Together with two parallel contracts for neighbouring regions this agreement covers almost one million workers (Bahnmüller *et al.*, 1991).

The implementation of this contract at the enterprise level has been partially successful from the standpoint of the union. In many cases its implementation was significantly delayed. Most works councils have not been able to use the influence they are granted by the contract to anticipate employees' needs (rather than reacting to management's plans). On the other hand, in one enterprise it was the management that initiated the negotiation of an enterprise-level agreement with the works council, which codified the further training language of the collective bargaining contract.

Cologne D.E.C.

The case of Digital Equipment Corporation illustrates one of the mechanisms by which the cost of human resources is taken out of competition among employers. Research focused on the Cologne branch of D.E.C., which employs about 500 people engaged in developing, selling and servicing software and hardware.¹ The majority of workers are highly skilled technicians and computer scientists, many with advanced degrees. The company was not a member of the employer association, and therefore not covered by the collective bargaining contract with the I.G. Metall. Employees who are represented belong to the I.G. Metall.

Prior to 1986 the union had almost no presence at D.E.C.-Cologne, but when an activist works council was elected contacts between the local union administration and the council grew stronger. As part of a strategic push to gain skilled white-collar members, the union has designated representatives throughout the country to work with interested council members at certain firms to learn more about the needs of such employees, and to help the councils use their rights and powers at the enterprise level. D.E.C. is one of the targeted companies. One of the areas of concern to the council was the lack of adequate training for D.E.C.-Cologne employees when new software products were released on the market. The council also raised concerns about other basic issues such as regularised job descriptions, a formalised compensation package and performance appraisal system, and the length of the work week.

The union was able to help the council codify its demands and make significant strides in the areas of training, compensation, job descriptions and assessment and other issues. In 1986 the council members had been afraid publicly to identify themselves too closely with the union for fear of losing upcoming council elections.

¹This case study is based on Wever (1993). We are indebted to Witich Rossmann of the I.G. Metall, Cologne, for continued updates on this case.

At the time, 2% of employees were union members. In the 1990 works council elections the councillors ran on the I.G. Metall ticket, publicising the union's role in helping them make significant gains over the previous four years. By then, 10% of employees were unionised. They won the election handily; not one of the challengers running 'against the union' gained a seat. In April 1992 the union was able to co-ordinate a brief 'warning strike' and as a result of that mobilisation, membership in the union jumped to over 20%. By June 1993 membership had increased to about 50% in Cologne, and a strike had forced the company to conclude a firm-specific contract with the union.

The D.E.C.-Cologne council was able to transform itself within the space of half a decade from an ineffectual and unskilled body into a keen, increasingly popular, and politically astute employee representative body. Its own strategy of using the union's resources to help obtain standard human resource management procedures has been effective also in enhancing the council's overall stature, popularity and capacities. The works council and union were able to gain a contract and force the company to raise its investment in training. In this way centralised bargaining structures and the relationship between unions and works councils help diffuse training innovations across firms.

It is in the metal working industry that most of Germany's most impressive examples of labour participation in management decision-making take place. But collective bargaining agreements specifically concerning further training have been reached in other sectors as well. In the printing industry, a 1990 agreement requires the employer and works council to consult annually about the further training needs of the work force. Another company agreement involves the Chemicalworkers (I.G. Chemie) and German Schell A.G., and states that further training will be offered to employees without regard to the actual skill requirements of a given job, in order to 'broaden the professional and personal competence of employees and make possible their more flexible deployment' (Bahnmüller *et al.*, 1991:174). The Service Union (H.B.V.) has developed an especially forward-looking technology policy, modelled on that of the I.G Metall, which has led to training innovations by councils in several banks and insurance companies (see, for example, Riexinger, 1988; Duwe and Becker-Töpfer, 1988; H.B.V., 1989). These contracts and policies represent the unions' strategic shift in the 1980s from a focus on buffering the impact of rationalisation on workers to the active anticipation of technological changes and associated training needs.

Skills development in practice: a Chrysler M.O.A. and the Alliance

Some US companies and unions have been able to create impressive and innovative mechanisms to support broad skills training. Examples include General Motors, Ford, Chrysler, Boeing, A.T. & T., Xerox, and others. However, innovations remain fairly isolated. The structure of employment relations and the incentives for job control continue to hinder co-operative efforts on further training and organisational innovation. Many successful training and further training experiments were started only because the company faced an economic crisis in which redefining the

labour-management relationship presented the only alternative to bankruptcy.¹ Nonetheless, some of the training experiments undertaken in the US are extensive and impressive. The following two examples illustrate the pressures for developing new training strategies, the ways in which they can benefit both labour and management, and the difficulties facing the parties attempting to do so.

A Chrysler M.O.A.

In the late 1980s, a Chrysler engine plant was being threatened with closure if it did not adopt a Modern Operating Agreement (M.O.A.) that would (a) significantly reduce job classifications for nonskilled and skilled workers, (b) cross-train skilled workers, and (c) use criteria other than seniority to promote, train, transfer, and recall workers.² But the local U.A.W. union at the plant rejected the agreement.

In an unusual move, representatives from the international U.A.W. came to the plant and negotiated alongside of the local bargaining committee. The international U.A.W. felt that accepting the M.O.A. was necessary to prevent the plant from closing and lobbied local union members to accept the agreement. On a second vote, local members reluctantly accepted the M.O.A.

But shortly after this contract approval, the local membership elected a new local union president and bargaining committee. The new local union president refused to implement the agreement and is essentially renegotiating it piece by piece with management. A supplemental seniority agreement was reached that governs layoffs, recalls, and transfers on a straight seniority basis.

The local union remains firmly opposed to cross-training skilled workers, fearing that this would undermine the occupational status of the basic trades and lead to the misuse of skilled workers. It has agreed to phase in pay-for-knowledge and teams as long as they create opportunities for workers to achieve higher wages.

This example highlights a common pattern. Management uses the threat of job losses to pressure local unions to agree to changes in work rules, seniority procedures, and training practices; unions see their employment security threatened without being offered any reasonable alternative,³ and thus attempt to protect the job control model (which provides little incentive for local unions to pursue extensive participation in issues of training or work organisation). The result is piecemeal changes, at best. If pay-for-knowledge and teams are introduced it is generally on a limited basis, and does not entail broad cross-training for skilled workers or any integration of production and maintenance tasks. The international U.A.W. has not forged a comprehensive sectoral solution to these problems, but can no longer rely on pattern bargaining to do so.

The intensity of the pressures on American labour and management to change the way they have traditionally approached employee training is illustrated by many examples of successful training innovation. One of the most impressive of these comes out of the communications industry, where American Telephone and Telegraph (A.T. & T.) and the Communication Workers union have been able to

¹This was particularly true in the airline industry in the decade after its deregulation in 1978.

²This case is based on Berg (1993).

³The current employment guarantee covering union workers in the auto industry does not apply during periods of declining demand. It therefore continues to encourage layoffs as a means of demand adjustment, which discourages investment in general skills.

transform an originally narrow and temporary training programme into an extensive and ongoing career-development effort.

A.T. & T., the C.W.A., and the Alliance

The Alliance programme in the communication industry is an independent, non-profit joint training and career development programme established by A.T. & T. and the Communications Workers of America (C.W.A.) (Batt, 1991). The programme reflected the C.W.A.'s strategy of raising training issues to a high level of priority in labour-management negotiations, grew out of a collective bargaining settlement in 1986, and was funded originally at a rate of \$3.75 per employee per month. The monthly funding rate has more than doubled and has been supplemented with lump sum allocations from A.T. & T. and with grants from various federal agencies. Supporting the national programme are approximately 350 local training committees that promote and administer various programmes to local workers.

Although it originally focused on assisting displaced A.T. & T. workers in finding jobs on the external labour market, over time it has broadened its programme to serve the career development needs of both displaced and current employees. It has developed mechanisms such as career assessment and planning, basic and advanced skills upgrading, pre-paid tuition, return to school programmes, promotion exam preparation programmes, as well as other personal development programmes. The Alliance is unique in that it exists throughout A.T. & T.'s twenty-two business units, making possible the development of a company-wide (and therefore countrywide) internal labour market.

One of the strengths of the Alliance structure is that it is sufficiently detached from both the A.T. & T. and C.W.A. bureaucracies and politics to function quite independently. Similar training programmes at other unionised carriers (for instance, Bell South and U.S. West) are more closely integrated into the traditional structures of labour-management relations. The relatively small size and decentralised structure of the Alliance have allowed it to respond directly to employee needs. This has been particularly important in light of the fact that A.T. & T. has been reducing the size of its work force consistently since the Bell System divestiture. This, along with other issues, has produced considerable tension and conflict in union-management relations. The Alliance has been able to avoid becoming entangled in these conflicts.

Over time, the Alliance staff has become more deeply involved in consultation with A.T. & T. human resource professionals and C.W.A. representatives in discussions about alternative work organisation arrangements and strategies for designing and introducing new technologies. It is unusual in that it anticipates technological changes rather than merely reacting to such environmental pressures. Moreover, there is general agreement that the Alliance programme fills the need for providing broad, general and transferable skills and long-term career development. While most of the unionised companies in the industry are offering their employees quality training of their own accord, it is only in conjunction with the union—in programmes like the Alliance—that training is directed at easing employees' transitions across jobs within the company or out of the industry (Batt, 1991).

One striking feature of the Alliance is that the union and management were able to transform what began as a measure to help laid-off employees into a programme that consciously shapes the company's internal labour market. Through the Alliance both parties became willing to take substantial risks. The company took the risk of investing in broad skills despite the danger that it might lose its investment if employees took jobs with competing firms. The union took the risk of abandoning job control in favour of a more flexible approach that met employees' long-term career development needs. The independence, scope and effectiveness of the Alliance represents an impressive and enduring success in the area of joint labour-management innovations in further training. The contrast between the quality of training offered unilaterally by the employers in the industry and the type of training supported by the Alliance is consistent with the notion that secure employee voice can provide much of the impetus for broad and effective training. It is noteworthy in this regard that similarly comprehensive training programmes do not exist in the nonunion portion of the industry.

Conclusions and policy implications

Let us briefly summarise the key points emerging from our comparison. The survey of further training practices in Germany and the US showed that US companies engage in relatively less training, more company-specific training and more management training than German firms. The V.W. case illustrated the way the German employment relations system allows labour to take the initiative with regards to members' skills. The diffusion of innovations across companies is illustrated by the Nordwürttemberg/Nordbaden collective bargaining agreement in metal working. The D.E.C. experience showed how labour can impose relatively standardised training measures even on a company that prefers not to engage in collective bargaining with the union. The strong pressures of job control, and the tensions between the local and national union are captured by the Chrysler M.O.A. example. Alliance illustrated how effective a union can be in promoting broad and extensive employee training that goes beyond the sorts of training that companies tend to offer unilaterally, and suggests the importance of insulating such joint experiments from the institutional and environmental pressures that can undermine them.

The German institutional infrastructure of employment relations is not without its problems. It remains unclear how well the institutions in the west will be diffused throughout the eastern states, and what consequences this will have for union and works council relations (Jürgens *et al.*, 1989; Fichter, 1991; Silvia, 1993). Increasing numbers of young people are attending university rather than pursuing apprenticeships (Lutz, 1990). Differences in training quality between large and small firms cause some tension within the training system (Casey, 1991). Some observers believe that the German unions will be undermined by European integration (Streeck, 1991; Streeck and Vitols, 1992). Notwithstanding these problems, two basic principles of the German case can be adapted to the American setting through public and private sector policies aimed at broadening employees' access to collective institutionalised voice at the workplace and removing some of the costs of

human resource development from competition among companies. The policy changes we prescribe are designed to place both business and labour in a position to negotiate more openly than the unregulated free market makes possible.

First, American employees require an institutional mechanism for articulating their training-related interests at the workplace. Obviously unions can perform this function. There is even evidence that unionisation is associated with more and broader training, and with higher quality and productivity (Mishel and Voos, 1992; Knoke *et al.*, 1993; see also the Alliance case discussed above). We believe that at least in part this is attributable to the fact that unions force employers to develop production and work organisation strategies that take some of their employees' long-term career interests (including more training and broader training than is typically available to American workers) into account. But we think it highly unlikely that the union movement will be able to reverse the trend of declining membership. The job control model, which emphasises fairly narrow skills, combined with low unionisation levels of the American work force, suggest the need for a different and more widely available form of worker representation.

We recommend the creation of a body loosely patterned after the German works councils, representing both blue- and white-collar employees, including professionals and low and middle level managers (see also Rogers and Wootton, 1992; McDonald, 1992; Wever, 1993; Kochan and Wever, 1991; Weiler, 1990). This employee council could institutionalise employee voice in management decisions about a specified range of human resource investments, and increase the importance companies attach to their human resources (see also Kochan and Osterman, 1990). It would be legally mandated in all workplaces with more than 50 or 100 employees. It would have no influence over wage determination, but would have a clear and enforceable set of training-related rights and responsibilities. Mandating the councils by law would be important for two reasons. First, any costs to employers associated with the council would be equalised across companies, rather than placing those with councils at a competitive disadvantage. Second, because it would not be contractually based, its power and legitimacy would not rest on job control; therefore, the employees and their representatives could develop conscious strategies for structuring internal and external labour markets that emphasise broad skill building.

As in Germany, the employee councils would require considerable help in defining and carrying out their mandate. This would provide a new area of interest representation for the unions and the A.F.L.-C.I.O. Not all unions will perceive this as an exciting new opportunity. But some unions have been particularly willing to experiment with new forms of interest representation, and would undoubtedly move quickly to fill the vacuum of centralised expertise on the employee side of the labour-management relationship. Based on their past experimentation, unions that are likely to support such a strategic shift include the Communication Workers, the Teachers union (A.F.T.), the Steel Workers, the State, County and Municipal Workers union, the Service Workers Union, elements within the Auto Workers union (among others).

Unions' incentives to develop such central consultative functions would be increased by measures encouraging more centralised forms of employer

co-operation regarding training issues. This brings us to our second policy recommendation, which is aimed at making it easier for employers to increase their investments in, and broaden the focus of, the training they offer their employees. To begin with, the government would need to create industry or regional forums for union and employer strategy development and co-operation around training, in order to integrate existing state-sponsored training initiatives with local vocational education and training systems. Beyond this, public policies need to encourage all employers of a given size to invest in their human resources at a roughly comparable rate. The most obvious mechanism to achieve this would be a training tax based on the French model, where companies spend 1% of payroll on particular kinds of employee training, or pay that amount in the form of taxes to the government, which uses these funds for its own training programmes. We recognise that a training tax is not without its problems and as a single policy it can do little to increase the types of training we have discussed in this paper. But it can certainly provide a means of increasing the number of firms that provide training and spread the costs of training across firms (see also Batt and Osterman, 1993). Employer consortia also help companies share the costs of training, and encourage diversified production strategies. By monitoring member firms they can ensure that uniform and high standards be maintained. Local and regional consortia already exist (some even focus on training), but particularly state governments can do more to encourage them (see for example, Rogers and Streck, 1990 and 1991).

Such initiatives alone will not ensure that firms provide training in broad general skills. The impetus in this direction would come from the unions and/or the employee councils whose membership have an unambiguous interest in more and broader training. Because some workplaces (most, in certain industries) are unionised, and because American unions negotiate contracts at the company-level or below, provisions would be required to clarify the division of labour between the unions and the councils. Various possibilities have been discussed in the emerging literature on works councils (Weiler, 1990; Freeman and Rogers, 1993; Kochan and Wever, 1991). We would favour that where unions exist, they be able to perform the functions legally ascribed to the councils. This would both increase the unions' expertise (which they can then transfer to works councils at nonunion workplaces whose employee representatives have less experience) and avoid creating extra costs to employers who already bargain with unions. The introduction of the interests of all employees into decision-making processes about training programmes, together with a training tax, will also encourage companies to reallocate funds away from management training.

These policies would require significant changes in current labour law, particularly to those provisions that define independent union representation (see Schlossberg and Reinhart, 1992). They would most likely meet with significant resistance from both union and management circles. This will undoubtedly create imposing obstacles to the development and passage of the sorts of legislation we endorse. Yet evidence makes clear that a significant portion of the US work force remains under-trained and that the competitiveness of American companies is directly linked to their skills (and thus the training policies). Moreover, and perhaps

more importantly, labour and product markets by themselves have been unable to solve these problems. In the absence of political intervention, we believe that economic forces will not be able to address the problems outlined above.

The skills problems of the US political economy cannot be solved simply by spending more money on training. They are linked to the lack of institutions capable of introducing long-term employee (and broader economic) interests into management decision-making. It is not so much the amount of money as the way it is spent that frustrates the development, implementation and diffusion of broad-based skills in the US. While the initiatives we propose may not be in the interest of individual companies (or unions) in the short term, we believe they will benefit the economy and the work force as a whole over the medium and long term. Without a broad institutional initiative to address these problems they will grow worse. New product innovations cannot compensate for the decreasing capacity of American companies to improve production processes. It will be increasingly difficult for firms to capitalise on scientific innovations, given a poor and eroding skills base.

We have seen how in the F.R.G., training, and the institutions through which it is developed and diffused, support one another in a virtuous circle. The contrast highlights the ways in which the fragmentation and lack of co-ordination in matters of training and further training in the US appear to be precisely the opposite—a vicious downward cycle. We urge that this cycle be broken by the development of inclusive local, state and federal institution-building initiatives.

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