Whither the dual system: pressures for change and prospects for the future of vocational education and training in Germany

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1. Introduction

The main aim of this paper is to outline some of the current key issues and pressures for change in German vocational education and training, particularly in relation to the dual system. There is no intention to provide a detailed account of how the German vocational education and training system works in practice. That ground has been extensively covered by a range of authors (Russell 1983; Schönfeldt 1986; Braun 1987; Hamilton 1987; Cantor 1989; Felstead et al 1994). However, by way of providing a context for matters of current debate and prospects for the future, I will outline briefly some of the anchors that have given stability to the framework of vocational education and training in Germany for over forty years.

2. Anchors for the framework of German vocational education and training

Control over education lies with the individual states

Under the federal constitution, responsibility for education lies with the individual states (Länder). Co-ordination is achieved through a Standing Conference of Ministers of Education and Cultural Affairs (KMK) of the individual states. This conference makes agreements that have led to a relatively high degree of standardisation in relation to vocational education and training, although the states may have very different stances on other aspects of education policy (Chisholm 1987). However, even when there is broad agreement, there is scope for individual states to experiment in different ways and adopt differentiated strategies for implementation even within broadly similar patterns of provision. While there is no single point of centralised control, the individual states (16 after unification) exercise tight central control within their own jurisdiction (Russell and Neale 1983; Chisholm 1987). For vocational education this means that outline syllabuses will be agreed by the Standing Conference, but that individual states will provide detailed syllabuses, teaching materials and advice to the Berufsschulen, who deliver the vocational education.

The chambers play a key role in vocational education and training

All firms must register with either their local Chamber of Industry and Commerce or Chamber of Crafts (the latter comprising mainly small or micro firms). The relevant chamber decides whether an employer is qualified to give training. All employer-based training (apprenticeship) contracts must be for a nationally defined occupation and registered with the employer's Chamber. The Chamber has responsibility for oversight of training programmes and for conduct of the terminal examinations. The Chambers of Industry have trade union membership on the committees that oversee apprenticeship training and testing (Russell and Neale 1983).

Responsibilities of the federal state

The federal state has responsibility for vocational training outside schools, for defining skilled occupations and for outlining the training regulations, which provide the framework, content and standards of training as they relate to each occupation. In practice, this work is usually carried out by Bundesinstitut für Berufsbildung (BIBB) (The Federal Institute for Vocational Training). The BIBB also develops training materials and supports pilot projects looking at innovative ways of delivering training.

The whole system is underpinned by agreement between the social partners

The national agreements, reached after extensive negotiations at which the social partners and the state are represented, drive the whole system. Indeed general agreements are used to apply leverage within the organisations of the constituent trade union and employer interests (Koch and Reuling 1994). At federal level apprenticeship occupations are only recognised by the state once consensus has been reached by the social partners (Reuling forthcoming). Thereafter work of BIBB, individual states, and chambers are all informed by dialogue between the social partners (Streeck et al 1987). That the social partners debate issues of practice, not just policy, can also be seen from the involvement of Works Councils in issues concerning training matters and utilisation of human resources (Streeck 1987).

Initial skill training is dominated by the dual system

Under the dual system apprentices receive a training contract with a firm, which specifies the nature of their firm-based training, and, by law, have to attend Berufsschule for vocational education for the equivalent of at least one day a week. At the end of the training contract, apprentices take terminal written examinations and, for technical occupations, practical examinations (Russell 1983). The other form of initial skill training is through attendance at full-time vocational schools, particularly in business and health and social care sectors, with work experience coming before, during or afterwards, depending on the type of school (Cantor 1989). These schools though were set up for occupations either not covered by the dual system or as a means of improving the qualifications of those seeking to effect a later entry into the dual system (Brown and Behrens 1996). Therefore they support rather than challenge the primacy of the dual system.

All training must be supervised by appropriately qualified personnel

Personnel with responsibility for supervision of training may be higher education graduates, or workers holding a special training qualification, but are usually Meisters. The Meister (Master) qualification is required in law to practise in the Handwerk (craft trades), to be an employer and to take on and supervise apprentices (Russell 1983). It may also be viewed as a qualification required of supervisors and others involved in the planning, development and organisation of work in larger companies (Sorge et al 1983; Rose and Wignanek 1990).

The Meister qualification is examined by the relevant chamber and can be taken after at least two years experience as a skilled worker. Although entry to the examination is technically open, in practice invariably candidates have followed a programme of

study, based around nationally-defined regulations. The syllabus includes sections on specialist theory, skills, law, accounts and on the theory and practice of the training of apprentices.

While a Meister may have overall responsibility and oversight of the training of apprentices, in some companies de facto supervision may be by other workers. In order to try to ensure that those with direct supervision responsibilities did have some training as trainers in 1972 a Pedagogic Aptitude Certificate was introduced. This involves the separate accreditation of the training of apprentices component of the Meister syllabus (Russell 1983).

Training regulations specify minimum standards

The existence of legally binding training regulations, valid throughout the country, mean there are minimum standards which must be met. The regulations cover duration of training, breadth and depth of coverage of theory and practical aspects of training content, structure of the curriculum and examination requirements (Reuling forthcoming). However, where training is company-based for three or four days a week, then there is scope for considerable variation in practice in the overall training package. This has de facto recognition in the perceptions of employers, parents, young people and others that the type of training (and to some extent to quality of training) varies according to where you are trained.

The nature of the training regulations, and the painstaking way they are constructed and reformulated, which requires agreement of the social partners, is of interest here too. With the process of reaching consensus itself taking a relatively long time, the interval between updating reviews is also relatively long, typically between eight and ten years. Hence a specification of minimum standards does allow leeway for innovative upgrading. Indeed Reuling (forthcoming) argues that "the German vocational training system would not function without the updates and innovations introduced by corporate training providers".

Forms of work organisation are such that extensive use is made of skilled workers

The German vocational education and training system has traditionally produced a huge number of skilled workers. Thus in each year from 1975-1992 between 450,000 and 650,000 young people passed their apprenticeship qualifying examinations in the territory of former West Germany alone (BMB+F 1994). The positive side of this is that the broad mix of abilities employers can expect to find in skilled workers and their abundant supply enables them to use forms of work organisation, which give workers a relatively high degree of autonomy over their work activities (Steedman and Wagner 1989; Prais 1995; Reuling forthcoming). On the other hand, the fact that the number of skilled workers qualifying each year greatly exceeds the number of skilled vacancies means that many skilled workers find their skills under-utilised (Herget 1987; Jansen 1993)

General education is a significant part of vocational education

Within vocational education and training, a significant general education strand is present, especially for young people. Within that strand, there is a clear theme of 'education for citizenship' (Max Planck Institute 1979; Raggatt 1988). This is a reflection of the fact that policy and practice of vocational education and training is the product of a tripartite decision-making process, with state interests being represented in their own right, not just as a mediator of trade union and employer association interests. The Federal Minister for Education and Science recently re-iterated the need for general education to continue within vocational education, where he argued that "vocational training must not be allowed to be reduced merely to an offshoot of European structural and industry policy. Vocational training must, after all, continue to be seen as more than just the process of generating occupational competence - other important elements are the development of key skills such as those associated with personality development, the development of methodology and social skills and the development of language and cultural competence " (Laermann 1995, p6).

Clear links between companies' product market strategies and the type of workforce skills they require

Finegold and Soskice (1988) argued that (West) Germany was an example of an economy with a 'high skills equilibrium'. Soskice (1995) extends this argument about the match between the goods companies produce and the type of skills and qualifications they require of young people. German companies produce, by and large, "high quality, relatively sophisticated goods, often with a high degree of customisation and intended for niche markets - in other words types of production requiring a non-managerial workforce which has a sound understanding of technology and good technology qualifications, which is prepared to stay with the company and acquire company-specific organisational skills, which is prepared to work co-operatively and, in many cases, to shoulder a quite considerable amount of autonomous responsibility" (p157).

Soskice (1995) though is keen to point out that the widespread use of such production strategies is dependent upon other institutional arrangements, such as access to long-term finance, a co-operative and integrated system of industrial relations and close co-operation between companies to ensure the technology diffusion necessary for high-quality production strategies. This means that institutional structures, company and trade union policies are all in fundamental alignment with the need for young people to develop substantive vocational skills and qualifications.

3. Key issues and pressures for change in German vocational education and training

Poor long-term prospects associated with some apprenticeships

The widespread recognition of the value in the general labour market of a recognised vocational qualification (Heinz 1987) can, in some respects, be a double-edged sword for young people in less popular apprenticeships. Such apprenticeships may be offering relatively poor quality training and support, with little or no chance of being kept on after completion of training (Brown and Behrens 1996). Yet the young people know that they have to complete their training otherwise they are likely to be pushed to the margins of the labour market (Herget et al 1987). This is because those who have completed an apprenticeship tend to sweep up the more desirable semi-skilled employment positions, even in fields unrelated to their original apprenticeship: as employers are looking for young people who have demonstrated perseverance and a 'willingness to learn' (Behrens and Brown 1991). As a consequence, unless a trainee can transfer to a 'better' apprenticeship early on in her or his training, then he or she may feel they are 'locked into the apprenticeship': completing it can become a real ordeal (Brown and Behrens 1996). The feeling of entrapment may be increased as such apprenticeships are usually filled by those with low level school-leaving qualifications, who would not wish to follow a full-time education route.

That poor long-term prospects are associated with less popular apprenticeships is unfortunate, but hardly surprising. However, some popular female apprenticeships also have poor long-term prospects. Over 20% of female apprenticeships in 1993 were for doctors' assistants, dental assistants or hairdressers (BMB+F 1995). Despite substantial attrition during the apprenticeship, many of those completing training will not get skilled work, and even for those who complete training long-term prospects are often poor (Brown and Behrens 1996). The relative lack of challenge to the marked gendering of occupational socialisation processes (Wallace 1994) is problematic. This is particularly so given that the young women in training are often relatively well-qualified: indeed Krüger (1990) argues that women's aspirations, and long-term prospects, may spiral downwards during this time. The gendering of training opportunities and the way training operates in practice means that many young women are effectively being equipped to enter a secondary labour market (Brown and Behrens 1996). While others in clerical and support functions in companies may often be under-employed in that they are often over-qualified for the functions assigned to them (Meulders and Plasman 1995).

The poor long-term prospects associated with some apprenticeships pose two different types of challenge for vocational education and training in Germany. First, there are the very high drop-out rates associated with some apprenticeships, as young people become disillusioned with their training and/or seek an apprenticeship elsewhere (Brown and Behrens 1996). Although the extent of such problems tended to relate inversely to the health of the economy, in general, and the local labour market in particular, and as such problems tended to be regional rather than national (Brown and Behrens 1996). Second, the poor long-term prospects, leading to occupational cul-de-sacs, associated with other apprenticeships that have traditionally recruited well-qualified school-leavers, may start to make firm-based training a less desirable option compared with remaining in full-time education. The failure to keep open

possibilities for progression being particularly, but not exclusively, associated with some popular female apprenticeships.

Lack of opportunities after age 20 to recover from initial failure in vocational education and training

In any one year between 10-14% of young people leave the education and training system without a vocational qualification (Kloas 1995). This identifies those leaving the education and training system, and should not be confused with the considerable numbers of young people who move within and between education, schemes and apprenticeships in their attempt to achieve a recognised vocational qualification (Brown and Behrens 1996). As a consequence: "according to estimates from the Federal Institute of Vocational Training, around 1.6 million people in the 20 - 30 year-old age bracket alone have no vocational qualifications and are not undergoing training" (Kloas 1995, p105). Having missed out initially, the chances of obtaining a recognised vocational qualification subsequently are remote. Full-time retraining is unlikely to be an option because of the need for formal entrance qualifications and pressures from the workload imposed by the accelerated training process involved in retraining. Similarly in order to enter for the examination to achieve skilled status set by a chamber you have to have at least six years relevant job experience. Additionally, you will be expected to have studied at Berufsschule in the evening and at weekends to cover the required syllabus. Hence there are few graduated ways to recover: the very few pilot projects and special programmes in this area are not being built upon because of funding constraints (Kloas 1995).

Current debate about whether to differentiate levels of apprenticeship qualification

Over the past twenty years there has been a tendency to phase out or upgrade the less demanding two year apprenticeships. Indeed nearly all apprenticeships now require three to three and a half years training, with only about 5% of apprentices undergoing training that lasts less than three years (Reuling forthcoming). This reinforces the status, standing and general labour market utility of completing a skilled qualification (Heinz et al 1985). However, conversely, this increases the labour market disadvantage of not attaining such a qualification (Brown and Behrens 1996).

The general level of educational achievement has been increasing over time (see table 1). One consequence of this is that there has been increasing numbers of (older and) more qualified applicants for the more popular apprenticeships. However, from 1982-86, demand for apprenticeships outstripped supply of training places such that each year between 30,000 and 60,000 (between 5 - 8%) applicants could not get a training place (BMB+F 1994). This meant that those who had the poorest educational qualifications often had to enter special schemes (Brown and Behrens 1996). The situation started to change in 1987, when supply of training places started to exceed demand. In 1991 and 1992, over 120,000 training places in former West Germany were unfilled, and the number of unplaced applicants was less than 12,000 (or about 2% of the total) (BMB+F 1994). As a consequence, increasing numbers of, young people from 'disadvantaged' backgrounds (that is, those with cognitive or social learning difficulties or with a different linguistic and

Table 1: Level of Educational achievement upon leaving school over time:

School leavers in thousands (percentage figure in brackets):	Year of leaving:		
	1970	1980	1990
- without secondary general school certificate	140.3 (18)	109.4 (10)	53.6 (7)
- with secondary general school certificate	348.8 (45)	391.4 (34)	199.9 (25)
- with intermediate school certificate	200.1 (26)	422.2 (37)	283.9 (35)
- with HE entrance qualification	91.5 (12)	221.7 (19)	274.7 (34)
- total school leavers	780.7	1144.7	812.2

Table constructed from BMB+F (1994) data

cultural background) were applying for and getting apprenticeships. There was concern though about whether such trainees would be able to complete their apprenticeships successfully. These trends were exacerbated by recent patterns of immigration. There are arguments therefore about whether new two year traineeships could be introduced with less emphasis on theory (Reuling forthcoming).

The argument in favour of such two year apprenticeships is that it could help integrate groups, who otherwise might be marginalised, into the mainstream training system. The argument against is that vertical differentiation could create first-class and second-class occupations, and this could undermine the positive effects of the 'Beruf' principle (Reuling forthcoming). A more radical alternative still would be to use a stage-wise approach, or allow for accumulation of units or modules, but the social partners, especially the trade unions, are wary that this could start to unravel the integrated nature of training and the primacy of recognised vocational qualifications, which have not only a general labour market utility, but also a direct financial value because of the link to the collective bargaining system (Koch and Reuling 1995).

The sharp reduction in the number of training places on offer in former West Germany (just over 500,000 places available in 1994, down by almost 20% from the 1992 level [BMB+F 1995]) means the problem of unfilled training places has become a regional rather than a national problem. That is, in the South, particularly in Bavaria and Baden-Wuerttermberg, about 15% of training places remained unfulfilled in 1994 (BMB+F 1995). However, the increase in the number of apprenticeship applicants

with 'disadvantaged backgrounds' means that the issue of whether the 'level' of the final qualification is effectively beyond the reach of a significant minority of candidates remains a concern.

Relative importance of occupational and internal labour markets

Marsden and Ryan (1991) identify there has been increasing convergence and linkage between internal and occupational labour markets as internal labour markets have become more important in Germany. However, it may be that, rather than going into decline because of a lack of flexibility and 'fit' with new structures of work, it may be that occupational labour markets, and the principle of 'Berufe', may undergo a resurgence. At least, according to the arguments of Lutz (1994) the route of acquiring skills in internal labour markets, familiar to other systems, will become more problematic, as a result of changing patterns of (Post-Fordist) work organisation. Additionally, Lutz argues that at the level of the economy as a whole there will be a premium on mobility in the inter-firm labour market, in order to take advantage of the flexible specialisation of small firms and production units.

Shifting employer attitudes towards the apprenticeship system:

The sharp drop in demand for training places during the period 1986-92 could easily overshadow the significant, but less marked, fall in the supply of training places (a reduction of over 90,000 places to 623,900 in 1994 [BMB+F 1995]). However, it is since 1992 that, in former West Germany, the supply of training places has fallen sharply to 503,000 places (BMB+F 1995). While this could be seen as an adjustment that brings supply and demand closer together, what the overall figures do not show is the loss in the number of high quality training places. Some large companies in particular have been re-appraising their attitudes towards apprenticeship training in the 1990s (Koch and Reuling 1995). This has been partly due to their increasing use of recruitment from higher education, the increasing importance given to continuing training and the greatly reduced human resource requirements in the wake of extensive rationalisation (Reuling forthcoming). Even if the large companies held up the number of their training places, without the strong likelihood of this translating into permanent skilled employment opportunities at the company, (and this process used to be as Clement (1985) argued an important component of corporate identity), then higher education may be seen as an increasingly more attractive option. In turn, this could set in train a further downgrading the apprenticeship option in the eyes of two key constituencies of support for the dual system : large employers and relatively highly qualified school leavers. Indeed there are the first signs of the exhortatory calls to employers to train highly skilled young workers, so familiar in the UK context: "it is first and foremost the business community and the public administration .....[who] must ensure that through appropriate human resource development measures they can offer capable young skilled workers who are keen to train further career and self-advancement prospects which are as attractive as those offered to higher education graduates" (Laermann 1995, p11). This is a quote from a speech to a European Congress by the German Federal Minister of Education and Science, worried that the vocational training option is in danger of being seriously undermined.

Attempts to promote equivalence between general education and vocational tracks

The relative position of the vocational track, as against the academic route, has traditionally been much stronger in Germany than in other countries (Lane 1988; Cantor 1989). Indeed, even with very little cross-transfer into, for example, universities, not only was apprenticeship training highly regarded, but there were (for young men at least) plenty of opportunities for progression in employment and to obtain further technical or supervisory qualifications (Sauter 1995). However, with the academic route becoming more popular, and apprenticeships becoming less attractive, to young people, then there are dangers that the status of the vocational track could suffer a spiral of decline.

Indeed, the collapse of the virtual guarantee of progression into well paid, skilled permanent employment, with prospects of further progression, for a sizeable proportion of the (male) apprentice cohort has meant that links back to the academic track have assumed considerable significance. In 1992, 15% of apprentices overall, and over a quarter of those with business apprenticeships in industry and commerce, already possessed qualifications which guaranteed them HE entry (BMB+F 1994). However, for most of the rest on the vocational track, progression was more or less restricted to vocational education. Further this progression was more or less predicated upon a corresponding rise in employment status and responsibilities. Indeed Reuling (1995) argues that the combination of training for an occupation and training through an occupation is a strength of the German system. If the link with progression in employment is broken, then that makes highly specialised vocational education a riskier proposition. It was precisely the **combination** of experience and formal qualification that had such value in the labour market.

For the last few years there have been some pilot projects seeking to develop more work-based routes to gain entry to higher education. However, the need for construction of such bridges has become urgent to try to halt the downward slide in the status of the vocational track. The Federal Minister of Education and Science sees that such bridges are now vital: "equal standing for vocational training and general education also signifies that access to higher-level education and training tracks is equally open to both sectors" (Laermann 1995, p12). This also acts to re-emphasise the significance of the general education component of vocational training: it must "aim to develop general knowledge and a comprehensive range of personal and social skills alongside its focus on occupation-specific competence" (ibid, p12).

Who will fill lower-middle technical and supervisory positions in future?

One of the important battlegrounds for those coming from vocational or vocational/academic tracks is over which group gets the dominant share of lower-middle technical and supervisory positions in future. This was traditionally the province of the skilled worker, promoted after attainment of further qualifications, underpinned by learning from experience and further publicly regulated continuing education and training. Indeed the number of people qualifying as Meister has increased from 6,200 in 1980 to 15,000 in 1992 (Drexel 1995). However, the development of flatter organisational structures has reduced opportunities for promotion, as functions traditionally associated with Meister and technicians have

been devolved to skilled workers in schemes using teams, production islands and the like (Drexel 1995). Further, some companies have chosen to fill the promoted posts with those from more specialised vocational/academic tracks (up to and including Fachhochschulen). Drexel (1995) predicts that in the medium term "this pincer constellation will lead to a pronounced decline in the attractiveness of training for intermediate level qualifications" (p144) and Sauter (1995) argues that "if this trend were to gain general acceptance a result could be the disappearance of 'bridge qualification groups'" (p135) between engineers and regular workers.

The danger is that successful completion of an appropriate apprenticeship will still lead to skilled worker status in industry, but there would be little likelihood of further progression. It could be argued that this applies only to a minority of apprentices in any case. The number of apprentices entering the craft sector has held up and their prospects are probably as differentiated as they have ever been, and most 'female' apprenticeships have always had very circumscribed progression prospects (Brown and Behrens 1996). This, however, overlooks the symbolic importance of this group of skilled workers to any overall representation of the dual system. Both within Germany and outside, one of the great strengths of the dual system was seen to be the way that successes of the system went on to fill an array of skilled, technical and supervisory positions in industry (Rose and Wignanek 1990; Russell 1991; Brown et al 1994). blockage of that progression route would greatly harm the 'image' of the dual system: the purely vocational track would suffer a major blow to its status. Drexel (1995) makes this point forcefully "the structure of the continuing training system, lays the foundations for *either walls or bridges in the workforce and corporate work processes"* (p145, emphasis in the original). Drexel (1995) therefore clearly sees the prospect of the vocational track coming up against a wall, rather than acting as a bridge, to progression of the traditional kind.

4. Discussion

The first point to make is that of the anchors identified in the first part of the paper the only one which is visibly weakening is the domination of initial skill training by dual system. The other anchors, together with a reduced role for the dual system, are therefore available to ensure a degree of continuity to any revision of the framework of vocational education and training in Germany. There are nevertheless significant pressures operating on the system of vocational education and training which will need to be accommodated.

The issue of gendered occupational choice processes may or may not be defined as a major problem in itself. However, the gendered inequalities in progression opportunities, consequent upon such choices, should be regarded as problematic. Ironically, attempts to address recent concerns about reducing progression opportunities for young men may 'free up' progression opportunities for young women, who find themselves in occupational cul-de-sacs. In particular, those young women, who have substantive records of educational achievement within initial education and (full-time) vocational education, together with experience of work, could benefit from measures to extend access to higher education and/or open up continuing education and training, whereby spells of employment and education are interpersed. Whether inequalities would still be extant at subsequent levels is beyond the scope of this paper, but at least there would be the opportunity to redress a major

weakness of the current vocational education and training system: the way young women's aspirations, opportunities and long-term prospects spiral downwards over time (Krüger 1990).

In some respects the marginalisation of those who are not successful within vocational education and training is of course an intended consequence of the system. Provided entry into an apprenticeship is open to all, then reserving skilled jobs, and the pick of semi-skilled jobs, for those who were successful could be regarded as reasonably meritocratic. However, previous work showed that there were structural inequalities in the different opportunities and processes of becoming skilled (Brown and Behrens 1996), even though individuals, by personalising structural impacts, tended to blame themselves for any failure to get or complete training, even in adverse labour market conditions (Heinz 1985).

Further, if the strength of the economy was such that, for most of the last forty years, being pushed to the margins of the labour market still meant that most people found it possible to find some employment, even if unskilled or insecure, then the marginalisation process was unlikely to be defined as a major social problem. However, for the first time in forty years there are major doubts about whether high unemployment rates will prove to be just a temporary cyclical problem. Allied to this is the structural squeeze on the availability of unskilled jobs, which means that the consequences of an initial failure to obtain recognised vocational qualifications are now much more serious. In such a changed context, there needs to be a much more fully developed framework of support for those who subsequently try to become skilled. Pilot programmes, run by state governments, making use of modular on-the-job training, guidance support and leading to recognised qualifications, have all been disrupted by complicated and restrictive funding practices (Kloas 1995).

Kloas argues that "one way out of the difficulty would be a federal programme which combines the provision of recognised training for young people [aged between 20 and 30] without qualifications with an employment context" (p107). Proposals for the introduction of government employment training schemes for young adults will of course sound familiar to a UK audience, even though it would represent a significant new direction for vocational education and training in Germany. However, the operation of the schemes would still be under the control of the individual states, and training would last for between three to five years and lead to a recognised vocational qualification (Kloas 1995). Those completing such schemes would, therefore, have significant work experience and a qualification with a general labour market utility as well as a particular labour market value. This proposal dovetails well with the existing dual system, although the scale of its ambition might mean that the number of schemes and individuals that could be funded would be limited.

The above was addressed at remedying problems of young people who had left the education and training system without a vocational qualification, through intensive efforts at re-integrating them into the existing training system, while leaving unchanged the framework of vocational qualifications. A bolder approach would be to recognise that the 'hurdle' of the final examinations is likely to be too high for a number of candidates from 'disadvantaged backgrounds' (Cantor 1989). In the past, such individuals were quite likely either not to enter an apprenticeship, especially if they were from a different linguistic or cultural background, or else be held longer,

within the education system, prior to entry to an apprenticeship (Brown and Behrens 1996).

The changed training place market has meant more applicants from 'disadvantaged backgrounds' are applying earlier for an apprenticeship place. The reason for this is two-fold. First, some of the applicants are recent immigrants, who are ethnic Germans, but are nevertheless disadvantaged by their different linguistic and cultural background. They are, however, attracted by the German 'ideal' of training for a 'Beruf'. Second, the special schemes and 'holding pools' were often ineffective, in that they often did relatively little to enhance the chances of young people eventually getting skilled employment (Casey 1984; Behrens and Brown 1994). Hence the location of training is seen as significant, bringing with it motivational benefits and opportunities to 'get on' outside a formal education setting. From this perspective, it is understandable that such young people apply for apprenticeships, and they are likely to learn a good deal, even if they are unlikely to attain the final qualification. However, even if the process has value, the outcome (a failure to achieve a recognised vocational qualification) is unsatisfactory.

The introduction of a less demanding two year apprenticeship, with less emphasis on theory, could be one option (Reuling forthcoming). However, the danger is that such apprenticeships would be seen as leading to second-class occupations. The more radical alternative, using a modular system of unit or credit accumulation, would allow people to build more slowly towards their final qualification. The danger with this option is that in addressing one problem it could create a myriad of other problems, if it led to an unravelling of the current system of vocational qualifications. Overall then, on the issue of how to address problems associated with the failure of some young people to attain a recognised vocational qualification the German system is between a rock and a hard place. The outcomes of the current system are unsatisfactory for this group, while proposed solutions may create problems elsewhere for the system.

The debate about the relative importance of occupational and internal labour markets appears finely balanced. The idea of a 'Beruf' (occupation) as a defining characteristic for the career of an individual is under threat, from arguments about the gathering pace of technological change, organisational change and so on. However, while these changes destabilise occupational labour markets, they play even greater havoc to the idea of progression through a structured internal labour market. Lutz (1994) puts forward a plausible case that the principle of 'Berufe' may therefore undergo a resurgence. In practice though, even if the principle is revitalised, Beruf will have in some respects a different meaning in future than it did in the past. This also gives some indication of how the competing claims for the significance of occupational and internal labour markets could be resolved. If neither operate in the same way in the late 1990s, as they did in the early 1980s, then the way is open to argue that it is the way individuals handle the transitions between the two that will be critical in future. That is, an individual will have to be able to translate 'bundles' of skills, knowledge and understanding between contexts: a process which will be greatly helped if the 'bundles' have a recognised value on the labour market. The level of aggregation of these 'bundles' for some purposes is likely to be less than a current 'Beruf', not least so as to enable a more flexible means of putting together the different components of a 'Beruf'. There could be different mixes in the way skills are acquired and how

learning is targeted (Drexel 1995) and this could have implications for the linkage and interaction of the internal and occupational labour markets.

The firm-based vocational track has become less popular, compared to education-based academic or academic-vocational routes. The uncertainty over progression prospects for those on the vocational track being a particular concern. Only through strengthening work-based routes to higher education and higher level education and training will it be possible to maintain the relative status of the vocational track vis a vis general education, although formal equivalence may remain an aspiration rather than an achievable goal.

The traditional group who filled lower-middle technical and supervisory functions were promoted skilled workers, who had achieved further technical or supervisory qualifications. This group is under pressure from two directions. First, the number of such positions is being reduced, as many of their functions are being devolved to teams of skilled workers. Second, increasing numbers of promoted posts are being filled by people with higher level education and training. This means that progression prospects, of the traditional kind, from the vocational track will become more circumscribed. The attainment of intermediate-level qualifications may have less value within relatively large organisations. This again will act to make access to higher level education and training even more important. In effect, the work-based vocational track cannot survive as a significant progression route, unless it engages much more with other educational opportunities, rather than being predominantly employment-based. A mix of different ways of acquiring skills, drawing on combinations of education-based learning and learning in the workplace, over time (Drexel 1995) being one suggestion as to how it would be possible to maintain the possibility of horizontal as well as vertical mobility.

5. Prospects for the future direction of vocational education and training in Germany

The defining image of the dual system as firm-based training, with part-time vocational education, leading not just to the guarantee of permanent skilled employment, but also carrying the possibility of further firm-based progression to technical or supervisory positions, is increasingly difficult to sustain. That the image translated into reality mostly only in specific contexts (particularly 'male' traineeships in large companies) should not detract from the potency of image. Changes to employment structures and patterns of work organisations in companies, however, mean that all aspects of the previously smooth upward transition are now problematic. The vocational track in Germany will need to be reformed, but the extent of continuity in other aspects of the vocational education and training system should not be overlooked. In particular, most of the other 'anchors' of vocational education and training remain in place, which should mean it should be possible to construct a new consensus, and a new image, for the future direction of vocational education and training.

The precise elements of that new consensus will arise after a period of discussion and negotiation to reconcile the interests of young people and their parents, educational institutions, the social partners, state governments and the federal government. However, it is possible to identify a number of likely trends:

- the primacy of the largely firm-based route to skilled status will be increasingly challenged: experience of and learning at work will remain important, but education-based 'blocks' of study will become much more significant;
- the importance of continuing general educational development for young people within vocational education and training will be re-emphasised;
- greater attention will be given to creating 'second chance' opportunities to obtain recognised vocational qualifications for those over 20, who did not initially complete an apprenticeship;
- there will be further debate about how to meet the aspirations of those on vocational tracks who come from 'disadvantaged backgrounds': the introduction of less demanding two year apprenticeships or of a system allowing credit towards a full vocational qualification to be accumulated over an extended period of time being two possible options;
- one response to the increased instability in both occupational and internal labour markets will be to look for different mixes in the way skills are acquired and how learning can be targeted such that there is greater linkage and interaction between what is required in internal and occupational labour markets. The level of aggregation of some of the resulting 'bundles' of skills, knowledge and understanding are likely to be less than that required currently for a complete 'Beruf';
- access to higher education and higher level education and training through work-based routes will be made easier. This applies to both those with initial skilled and intermediate-level qualifications;
- there will be more flexibility in how people can mix different ways of acquiring skills, drawing on combinations of education-based learning and learning in the workplace, over time;
- even if it is not an explicit policy objective, one by-product of introducing more flexibility, and encouragement of vertical and horizontal mobility, into the vocational education and training system as a whole, will be to open up opportunities for progression to often well-qualified young women who find themselves in occupational cul-de-sacs, with poor long-term prospects.

6. Conclusions

The era of virtual complete domination of vocational education and training in Germany by the traditional firm-based dual system is coming to an end. In future, there is likely to be a greater variety in how vocational tracks are constituted, with greater linkages to higher education, higher level education and training and continuing education and training. The balance of time spent in education-based learning and learning in the workplace may shift more towards the former. The system as a whole will be more flexible, with greater emphasis on horizontal and vertical mobility. However, education and training driven by a clear occupational focus (a sense of 'Beruf') is likely to remain the choice of very large numbers of young people. It is just that, in future, it might be more accurate to portray this as a vocational academic track, based at different times and to differing degrees in work and education, rather than a primarily firm-based vocational track. Indeed there is a certain irony in that the decline in the supremacy of the firm-based dual system, with education as the junior partner, could mean that a future dual system more closely

lives up to its name: with a more equal partnership between education and work in the delivery of vocational education and training.

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