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Apprenticeship: between theory and practice, school and workplace

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Apprenticeship: between theory and practice, school and workplace¹

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October 2011

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1. Introduction

The term ‘apprenticeship’ covers a wide range of practice, from the extended periods of servitude and limited learning that featured prominently in early modern England to the high quality programmes of vocational development provided by many large European manufacturing firms nowadays. The institutional attributes of ‘apprenticeship’ vary considerably even among high-income countries, ranging from the transparency of the ‘coordinated’ Germanic systems to the opacity of the market-oriented English and Italian systems.²

One way of assimilating this variety of practice is to consider specific attributes of apprenticeship. Several taxonomies have been proposed for the analysis of cross-national differences in systems of vocational education and training, focusing on such attributes as the role of employers, social partnership, employment relations, education systems, and the state.³ Although normative concerns often inform such analyses, the frameworks proposed are usually conceived in positive terms, i.e., as organising the evidence and analysing causality, but not as determining merit.

This paper’s approach, by contrast, is one-dimensional and normative. Apprenticeship practice is examined in the light of a specific dualist ideal: the synthesis of theory and practice, on the one hand, and of the classroom and the workplace, on the other. The ideal was

² Snell (1985), ch. 5; Ryan et al.(2011), Wolter and Ryan (2011).

³ E.g., Greinert (1996), Busemeyer (2009a), Steedman (2010).

advocated by educationists, notably Kerschensteiner, who favoured apprenticeship as a mode of education, technical and even general, instead of simply vocational training and practical learning. It suggests the desirability for apprentices of a status that shares particular features with those of the full-time student and the regular employee, while being at the same time clearly separated from both.

The first question suggested by such an ideal is: to what extent is it realised in practice? The issue is examined here in terms of particular attributes of apprenticeship systems: the contractual status of apprentices, their right to participate in industrial conflict, how their income is determined, and the level of their pay. These four attributes are selected partly out of interest and partly because of their neglect in institutionalist writing on apprenticeship. The evidence concerns primarily post-war Britain and Germany, supplemented selectively by Italy and Switzerland.

The realisation of the ideal in terms of those four attributes proves imperfect and unstable in practice. The status of the apprentice is not always distinct from both the full-time student and the regular employee, and it has varied substantially over time, particularly in Britain and Italy, but even in the relatively settled German and Swiss systems. The second question is therefore: what determines the gap between the ideal and the real, and the mutability of the gap? That question is only touched on here, with a suggestion that the answer lies partly in the transitional position of apprenticeship within the individual's life cycle, partly in the economics of training, and partly in the goals and power of the interested parties: employers, trade unions, politicians, public officials, and vocational teachers.

The paper is exploratory rather than definitive, relying more on inter-disciplinary speculation than on intra-disciplinary rigour. If it encourages further research on aspects that tend to be neglected in cross-national comparisons, any holes left unfilled or mistakes made will hopefully be excused.

2. Apprenticeship: meaning

What is meant by ‘apprenticeship’? It denoted traditionally the attachment of a young person to an employer for a period of years, in which labour services are exchanged for the opportunity to learn a skilled occupation (Snell, 1996). Nowadays, in transalpine continental Europe at least, apprenticeship also involves formal education. A broad definition, consistent with the ideal postulated above, might be that apprenticeship denotes programmes of learning that combine part-time formal education with training and experience at the workplace, and result in an externally recognised vocational qualification.⁴

The key attribute is then the blending, within an integrated occupationally-oriented programme, of theory and practice, and thus of technical knowledge and practical skill. In parallel with this pedagogical duality runs a locational one, juxtaposing the classroom and the workplace. In a simple account, technical knowledge is developed in the classroom, practical skill in the workplace. Such syntheses represent this paper’s ‘apprenticeship ideal’.

⁴ Similar definitions are used by Steedman et al. (1998, p. 11) and Wolter and Ryan (2011, pp. 522-3).

The blending of these components distinguishes apprenticeship from other types of vocational learning – on the one hand, from full-time vocational schooling, which typically lacks any workplace-based component more substantial than short spells of work experience, and, on the other hand, from on-the-job training and labour market training programmes, which typically lack an abstract, classroom-based component.

The difference between apprenticeship and the other forms of learning is a matter of degree rather than kind. Some full-time vocational programmes involve work experience; some on-the-job training programmes involve off-the-job learning, some of which may be construed as educational. Lines must therefore be drawn between what is and is not taken to be ‘apprenticeship’. Demarcation is required in two dimensions: first, between apprenticeship and on-the-job training and labour market programmes, in terms of the amount and content of their off-the-job learning component; second, between, apprenticeship and vocational education proper, in terms of the amount of work experience and work-based training.

The first issue poses more problems than does the second one. Whereas in Germany apprenticeship can be clearly distinguished from other forms of vocational training, the same does not apply to ‘apprenticeship’, as the term is widely used in Britain nowadays, nor to ‘apprendistato’ in Italy.

In England,⁵ while some of the learning that is nowadays supported by the Apprenticeships programme, such as craft training in engineering, combines part-time vocational education with work-based training, and thus satisfies the definition, much does not. This is because training standards vary greatly by occupation and sector, according to the decisions of individual Sector Skills Councils, and the ‘frameworks’ that those Councils have adopted for the service occupations, including those in business administration, retailing, customer service, and childcare, require little off-the-job learning and no formal education. ‘Apprenticeship’ has in effect come to denote in contemporary England any publicly-funded programme of work-based learning that satisfies the (frequently undemanding) requirements for public subsidy, however limited its educational content. It is therefore important to distinguish apprenticeship, i.e., the functional category defined above, from Apprenticeship, i.e., the programme organised and funded by government. In such a situation, the use of the term ‘apprenticeship’ is often confusing, cosmetic and objectionable.⁶

⁵ The categories ‘Britain’ and ‘England’ are here used as broad substitutes. The devolution of training responsibilities and the ensuing divergence of training practices in Scotland and Northern Ireland from those in England and Wales during the past decade means however that the developments described here for that period may strictly speaking apply only to England and Wales (here, ‘England’).

⁶ Ryan et al. (2006), (2007); Wolf (2011). Participants in the Apprenticeships programme must spend a minimum amount of their time away from their immediate job station, undertaking Guided Learning Hours. The minimum number of Hours is currently being increased, from 90 in 2004 to 280 (per year of training). The requirement can be met through part-time vocational education, but that is not required, as supervised study, self-instruction and even assessors’ time can be counted toward it. No data are available on the share of Apprentices who receive part-time vocational education at a further education college (Ryan et al. 2006, Table 1; BIS, 2009).

Similar problems arise in Italy. The legal reforms of 2003, which also sought to distinguish apprenticeship from labour market programmes, recognised three forms of apprenticeship: ‘right and duty’ (*dritto dovere*), organised as part of upper-secondary education; ‘occupational’ (*apprendistato professionalizzante*), geared to particular employers’ needs; and ‘higher’ (*alta formazione*), at post-secondary level. The first and the third of these streams must contain part-time vocational education, not just work-based training and, as such, fall under our definition of apprenticeship. The second stream typically involves no requirement for (as opposed to not ruling out) part-time vocational education, so most of it falls outside our definition – and it is by far the largest, accounting in 2009 for 72 per cent of all ‘apprentices’. As in England, so also in Italy: many ‘apprentices’ do not undertake what can validly be termed an apprenticeship.⁷

The second difficulty – distinguishing between apprenticeship and school-based vocational education – can be illustrated by the OECD’s criterion for classifying programmes of vocational education as ‘combined school and work-based’ (and potentially therefore as apprenticeship): that at least 25 per cent of the learner’s time be spent at the workplace. Programmes that are essentially classroom-based, with as little as one day per week spent at a workplace – such as upper secondary schooling with work experience components – are included. The difficulty causes limited concern, however, as such programmes appear to be rare and, where present, often aimed at lower secondary pupils (OECD, 2008, p.325; Wolter and Ryan, 2011).

⁷ Tiraboschi (2006); ISFOL (2010), p.7; Rustico (2011), Table 1.

3. Apprenticeship: merits and limitations

From one viewpoint, the definition of apprenticeship is a secondary issue. From another viewpoint, it matters greatly for the social and economic case for apprenticeship: the more inclusive the definition, the weaker the advantages of apprenticeship relative to the drawbacks. This section considers the net advantages of apprenticeship.

Three dimensions may be distinguished: pedagogy, skill content, and the school-to-work transition. First, compared to full-time schooling in general, and academically oriented curricula in particular, the ‘situated learning’ that characterises apprenticeship is for some learners both more motivating and easier to undertake than the less situated learning that characterises classroom-based programmes. The motivational and cognitive benefits are both visible in a comment by a female apprentice, engaged in a programme organised by a British car producer:

... now I’m here [at the workplace] I love doing the maths because it’s career related. Why can’t they teach car-related maths at school? It would be much better: you could understand it and see what it all means’ (Unwin and Wellington, 2001, p. 37).

The benefits of ‘learning through occupations’, as opposed to crude ‘learning for occupations’, were argued powerfully in such terms a century ago by Kerschensteiner and Dewey, in Germany and the US respectively.⁸

Second, compared to full-time, school-based programmes, the skills produced by apprenticeship benefit from the closeness of learning to production. Learners are exposed to both the production methods and the work requirements of actual – and normally economically viable – workplaces, rather than to classroom substitutes, whether simulated or imagined (Streeck, 1989). Thus the competitive success of large manufacturing firms, which are present to a varying extent in all four of the countries considered here, means that their apprentices learn to use state-of-the-art equipment and techniques. By contrast, traditional ‘voc ed’ in the US was hampered by the often outdated equipment and the absence of production conditions in classroom settings (Grubb, 1995).

Third, apprenticeship is associated with better school-to-work transitions. This shows up at different levels: nationally, in the inverse association between the size and quality of countries’ apprenticeship systems and their youth unemployment rates (relative to adult rates, at least); and individually, in the positive association between having taken an apprenticeship and outcomes – both pay and employment – in early labour market experience. The mechanisms that link apprenticeship to economic outcomes for young people appear to reflect,

⁸ Grubb (1995); Winch (2006); Gonon (2009). A further indirect benefit of apprenticeship for learning is the incentive to pupils in lower secondary schooling to learn more, in order to improve their chances of admission to a desirable apprenticeship programme (Soskice, 1994).

in addition to the pedagogical and skill effects cited above, the acquisition of superior information and contacts in the labour market (Ryan, 2001a).

Such advantages help explain, and potentially validate, the growth of policy interest in apprenticeship in advanced economies since the emergence of structurally high youth unemployment in the 1970s and the intensification of international competition in the 1980s (Christopoulou and Ryan, 2009).

There is however another side to the story: the limitations of apprenticeship. They represent the opposite side of the coin in each of the three categories of benefit. First, the pedagogical benefits of apprenticeship are selective: some learners, particularly those with a theoretical bent, learn more willingly and more effectively when facing non-situated, abstract learning. For others, a situated approach to learning makes no difference. The size of those groups is not known, though assumptions about it are typically implicit in government policies toward the expansion of higher education. In any case the existence of those groups is not in doubt (Rauner, 2012).

Second, not all apprenticeships involve great learning opportunities in the first place. Employers may provide apprenticeships as a source not so much of future skills ('investment-oriented training') as of low-cost production labour in the present ('production-oriented training').⁹ Learning content is then limited, and the closeness of apprenticeship to production can become a drawback rather than an advantage. Apprenticeship may be

⁹ Mohrenweiser and Zwick (2009), Mohrenweiser and Backes-Gellner (2010), Wolter and Ryan (2011).

experienced as exploitative ('cheap labour'). Such views were widely held among labour-oriented commentators in Britain in the last century, and in West Germany in the immediate post-war period (Gollan, 1937; Taylor, 1981). Indeed, such criticisms encouraged the near-total discarding in Sweden by the early 1970s of apprenticeship in favour of full-time vocational schooling (Nilsson, 2008). They remain relevant nowadays when externally specified training standards are absent, or set low, or not enforced, as in many developing countries, and in much of English and Italian 'apprenticeship' (Ryan and Unwin, 2001; Tiraboschi, 2006).

A further limitation of apprenticeship as a source of skills is the difficulty in practice of fusing theory and practice into a coherent whole. Complaints about weak articulation between the vocational college (*Berufsschule*) and the workplace have been endemic to German apprenticeship. Teachers in vocational colleges are often criticised for an overly academic approach, and for disdaining the practical, workplace-based components of apprentices' learning. Some employers are criticised in turn for showing little interest in the technical education that their apprentices receive. The two sides typically do not cooperate effectively, if at all, to coordinate apprentices' learning. Dealing with these problems remains an important policy challenge for German apprenticeship.¹⁰

Finally, problems occur also in school-to-work transitions. In the first place, the benefits of apprenticeship to individual participants, as compared to those of full-time

¹⁰ Achtenhagen and Grubb (2001), pp. 615 seq.; Euler (2003); Hoeckel and Schwartz (2010), pp. 40-43; BIBB (2011).

vocational schooling, tend to be limited to higher employment probabilities in the first decade of labour market experience – i.e., they typically do not involve the life-long gains in employment rates and pay associated with taking additional years of full-time schooling (Ryan, 2001a, sec. 7.2).

Second, apprenticeship is cyclically vulnerable, in two respects. Viewed in terms of youth opportunities, it is affected by the business cycle: in economic downturns, employers reduce their intakes of apprentices. Viewed in terms of employers' ability to attract youth, demographic fluctuations (baby booms and busts) affect the supply of young people available for training – even if the same fluctuations would affect the school system in the absence of apprenticeship (Brunello, 2009; Mühlemann et al., 2009). Given these two sources of fluctuation, the policy appeal of apprenticeship must therefore be sought instead in its longer-term, structural contribution to education, skills and productivity, rather than in any reduction of conjunctural difficulties.

4. Apprenticeship: ideal and real

The ideal of blending theory and practice, on the one hand, and the college and the workplace, on the other, suggests that an apprenticeship system should combine attributes from both sides of those dualities without adhering exclusively to either. The apprentice should share particular attributes with the student and the employee, but be clearly distinguished from each.

The ideal is reflected in the term 'Dual System' (*duale Ausbildung*) that is used to characterise apprenticeship in Germany. The term expresses the 'system of cooperation

between the firm and vocational school in initial training ...’ Although part-time education for teenagers goes back to the continuation schools of the late nineteenth century, the label itself was introduced only in the 1960s, in the run up to the 1969 Vocational Training Act, with its insistence on the sharing of responsibility for apprenticeship by vocational colleges and employers.¹¹

This section considers the extent to which the dualist ideal is realised in practice, in terms of four attributes: contractual standing, participation in industrial disputes, pay setting, and pay outcomes. These attributes are selected partly by way of illustration, but also because, although they are important, they are rarely discussed in the institutionalist literature.

Other, potentially relevant attributes that are not considered here include: the allocation of apprentices’ time between the college and the workplace; the right and liability to work overtime; holiday entitlements; liability to income tax and social security contributions; age at entry; retention by the training firm at the end of training; and the opportunity to continue formal education after training. A full treatment would include these aspects.

¹¹ Münch (1991), p. 37; Deissinger (1996); Busemeyer (2009b). The dual ideal is diluted in practice by the growth of co-operative training, which sees groups of employers, typically small and medium-sized ones, contract to provide the off-the-job component of training, in whole or part. Such arrangements are particularly widespread in engineering in Switzerland and Britain (Muelhlemann et al. 2007, ch. 10; Gospel and Foreman, 2006). Dilution comes close to destruction in the more extreme situation, widespread in England’s Apprenticeships programme, in which a specialist training company takes overall responsibility for the training programme (Lewis and Ryan, 2009).

The division of apprentices' time between the vocational college and the workplace stands so close to this paper's ideal that its exclusion requires justification. The attribute is in one sense straightforward. In continental transalpine Europe, apprentices must spend at least one-sixth, and typically one fifth, of their time in part-time courses at vocational colleges (i.e., in formal schooling, away from the workplace; Ryan, 2000, Table 3).¹² In Britain, by contrast, while that is still required in traditional craft occupations, notably in metalworking, most Apprenticeships in service occupations involve little or no vocational education (Ullman and Deakin, 2005). The difference between Britain and the other countries may be clear but its merits are contested. The advocates of competence-based assessment, as practised in modern Britain, commonly assert that the blending of college and workplace is not important for learning, and that a purely workplace-based programme can be optimal.¹³ Proper consideration of this controversy would require a more extended discussion than is possible here.¹⁴

¹² Some large German employers, including retail firms, are allowed nowadays to satisfy the requirement for part-time vocational education with facilities of their own rather than *Berufsschulen*.

¹³ Thus the peak employers' association holds that 'for some sectors and firms – notably the "traditional" apprenticeship sectors such as engineering – a significant part of the apprentices' training will take place off-the-job. But for others, most training will be more effectively undertaken on-the-job ... learning currently takes place in a variety of ways and locations ... the workplace is a different learning environment from the classroom ... more must be done to ensure the programme meets business needs' (CBI, 2009, p.2). Such views, in treating the classroom and the workplace as antithetical rather than complementary sources of learning, clearly reject the ideal that governs this paper.

¹⁴ Discussions of the issues surrounding 'competence' include Wolf (1995) and Winterton (2009).

4.1 Particular attributes of apprenticeship

Four attributes are considered here: the contractual standing of apprentices, their rights in relation to industrial disputes, how their pay is determined, and how highly they are paid.

Contractual standing

Employer-based training may function under a training contract, an employment contract, or both. The apprenticeship ideal suggests: first, that the apprenticeship contract be clearly distinct from the employment contract, with the apprenticeship contract spelling out formally the training-related rights and duties of the apprentice and the employer, while the employment contract does the same for the service-related rights and duties of the employee and the employer; and, second, that apprentices should hold a training contract only.

Such a situation was approximated in post-war West Germany, where the apprentice held a formal training contract, which spelled out the training-related rights and duties of both parties, but not an employment contract. The situation prevailed until the 1969 Vocational Training Act. In the discussions preceding that legislation, the Social Democratic Party (SPD) called for apprentices to hold the status of employee, not just trainee. The proposal was rejected by employers' representatives, who feared that it would lead to increases in apprentice pay and thus in their training costs (Taylor, 1981, p. 207). The Act itself, however, opened the door to the employment contract for apprentices, in stipulating that, unless

explicitly stated otherwise, the legal principles of the employment contract were to apply to the apprentice contract.¹⁵ Not surprisingly, by 1972 federal law formally classed apprenticeship as a form of employment (BMJ, 2001). Nowadays, in both Germany and Switzerland, unless otherwise explicitly stated, apprentices have the status of an employee, not just that of a trainee.¹⁶

In England, formal training contracts for apprentices go back to (and beyond) the formal indentures required by the Statute of Artificers of 1563 (Lane, 1996). The deregulation of apprenticeship in 1814 had led by the 1920s to the holding by most apprentices, in metalworking at least, of only a verbal apprenticeship agreement (Ryan, 1999, p. 42). The distinction in law between the contract of apprenticeship and the contract of ‘service’ (i.e., employment) continued to erode, so that by the 1970s legal experts saw the apprenticeship contract as constituting at law simply another form of employment contract, distinguished primarily by its fixed duration and training-related requirements (Hepple and O’Higgins, 1981, ch. 12).

The long-term convergence between contracts of apprenticeship and employment under English common law reflected the efforts of employers to shed three traditional obligations to their apprentices: first, to replace formal indentures by verbal agreements; second, to specialise apprentices on particular job tasks rather than to teach them ‘the trade’; and third, to be able to lay them off rather than to retain them during economic downturns.

¹⁵ *Bundesregierung*, 1969, p.1112, §3(2).

¹⁶ *Betriebsfassungsgesetz*, §5, Abs. 1; *Obligationenrecht*, Art. 344-6; Berenstein and Mahon (2001), § 175-8; Wettstein and Gonon (2009), p. 99.

Apprentices (and trade unions, on their behalf) reacted to being treated increasingly like regular employees by claiming trade union representation and collective bargaining coverage (Ryan, 1999).

Recent decades have been dominated by public training programmes, with all their ambiguities concerning the status of participants. The British government has recently legislated to clarify the contractual position. The 2009 Apprenticeships Act actually states that the Apprenticeship agreement, which must be provided to all Apprentices, constitutes a contract of employment, and not a contract of apprenticeship!¹⁷ The Act therefore separates Apprentices contractually from apprenticeship while firmly locating them in employment.

This apparently extraordinary development might be interpreted as evidence of the death in England of the apprenticeship ideal. Alternatively, given the secular convergence between the legal status of contracts of apprenticeship and employment, its separation of the Apprenticeship agreement and the employment contract, on the one hand, from the apprenticeship contract, on the other, might be thought unimportant. The presumptive reason for separating them is however revealing: to remove from an employer who lays off an

¹⁷ “... an [Apprenticeship] agreement is not to be treated, for common law or statutory purposes, as being a contract of apprenticeship (as recognised at common law) but is instead to be treated as being a contract of service [i.e., employment]” (Parliament, 2009, Part 1, Ch. 1, Section 35, #71). An exception to the requirement that Apprentices hold an employment contract has already been made, however, for athletes in training for the 2012 Olympic Games, who are publicly supported by the Apprenticeships programme despite not being trained by an employer

(<http://nds.coi.gov.uk/content/Detail.aspx?ReleaseID=416250&NewsAreaID=2>; accessed 7.7.11).

Apprentice during his or her training programme the liability to provide more than the standard compensation due to a laid off employee, as would otherwise be required under an apprenticeship contract.¹⁸ The Act thereby completes the convergence of the status of the Apprentice on that of the employee – while recognising ironically what little remains of the difference between those of the apprentice and the employee.¹⁹

The convergence of the Apprenticeship agreement on the employment contract reflects two factors that have encouraged successive British Governments to promote, and eventually to require, ‘employee status’ for participants in the Apprenticeships programme. The first is historical: to distance the programme from its immediate predecessor, the Youth Training Scheme, in which ‘trainee status’ without employment rights was associated with low pay (the publicly funded training allowance), low training quality and the exploitation of

¹⁸ In *Flett v. Matheson* (2006), the Court of Appeal decided that a participant in the (Modern) Apprenticeships programme could validly claim the contractual status of apprentice under common law, and as such, if laid off during the training period, be entitled to compensation from the employer not only for loss of pay during the remainder of the period, but also for loss of future earning power as a result of not being fully trained (Bowers, 2009, pp. 240-1; Indicator, 2007, pp. 5-6). The 2009 Act bars such claims by denying to Apprentices the status of apprentice under common law. The motive for the change in contractual status is indicated by the official statement that accompanied the draft legislation: ‘... we will ensure that the system is sufficiently flexible not to place additional burdens on employers other than a requirement to enter into an apprenticeship [sic] agreement’ (DCSF/DIUS, 2009, p.2).

¹⁹ The 2009 Act also indicates the dominance of (narrowly conceived) employers’ interests in the organisation of Apprenticeships: the principle that the apprentice’s right to complete training should have priority has been trumped by expediency, as represented by the government’s efforts to increase participation by employers.

youth labour (Lee et al., 1990). The second is structural: to respond to the dominance of specialist training providers among prime contractors for Apprenticeships programmes, by strengthening the links between the Apprentice and the employer.²⁰

The convergence between contracts of apprenticeship and contracts of employment in both Germany and Britain suggests at the minimum some weakening in the implementation of the apprenticeship ideal. Its significance is however reduced by the form it has taken: in both countries, the status of employee accompanies the training contract, rather being embodied in a separate employment contract.²¹ Moreover, the employment contract is, broadly speaking, nested within the apprenticeship contract, which itself constitutes an elaborate type of fixed-term employment contract.²² Both contracts stipulate the same basic conditions (hours of work, holiday entitlements, probationary period, disciplinary procedures, etc.) but the training contract extends beyond the employment contract, by including the reciprocal rights and

²⁰ Ryan and Unwin (2001), MAAC (2001), Lewis and Ryan (2009, Table 1), DIUS/DCSF (2009). The importance of employee status in the Apprenticeships programme has been increased also by the rise in the number of entrants who are already employed by the relevant employer on joining the programme – a tendency currently being intensified by the conversion of funding and participation from other adult training programmes (notably Train to Gain) to the Apprenticeships programme (Fuller and Unwin 2011).

²¹ *‘Das Ausbildungsverhältnis ist kein Arbeitsverhältnis. Auf den Berufsausbildungsvertrag sind aber arbeitsrechtliche Rechtsvorschriften und Rechtsgrundsätze anwendbar ...’* (Kull and Bitmann, 2006, p.1; see also Weiss and Schmidt 2008, § 139). For Switzerland, however, Berenstein and Mahon (2001: § 175-6) assert the continuing importance of the distinction between contracts of employment and apprenticeship.

²² In Italy, apprenticeship does not, in some interpretations, even constitute a fixed-term contract, as the standard legal restrictions on dismissal apply to it, making it de facto permanent (Varesi 2001, p. 154; Tiraboschi, 2011).

duties stipulated by public training law – including for German employers the duty to employ qualified training staff.²³

Contractual convergence is therefore more symbolic than substantial. The symbolic is not however unimportant. England's explicit identification of the Apprenticeship agreement as an employment contract rather than an apprenticeship contract aligns with the dominance in the Apprenticeships programme of the workplace and job training, and the marginality of the vocational college and technical education.

Right to strike

A second, contractually related, attribute is apprentices' rights to participate in industrial disputes. Two aspects are relevant: first, whether apprentices are free to take industrial action on their own, i.e., separate from that organised by a trade union; second, whether apprentices may participate in wider industrial disputes with their employer, as members of the trade union(s) involved. Apprentices who possess either right may be viewed as closer in status to the employee than to the full-time student. The discussion of these issues is confined for reasons of space to Germany and Britain.

²³ Deakin and Morris (2009), pp. 144-6. The nesting of an employment contract within the apprenticeship contract is not exact. For example, in Britain, until the 2009 legislation, it was harder for an employer to lay off, before the expiration of a fixed-term contract, an Apprentice than an employee (Green, 2011). Similarly, in Germany the employer is required by law not to require apprentices to do work that is not part of the occupation they are learning, in contrast to the discretion the employer enjoys over the duties of regular employees (Deissinger, 1996).

On the first issue, apprentices have no legal right to take independent industrial action in either Britain or Germany. German apprentices are contractually required to lodge complaints about their training programmes with the relevant conciliation committee (*Schlichtungsausschuss*), which is part of the local Chamber's training functions, without any right to strike independently over such matters (Deissinger 1996; BIBB, 2005, §9).²⁴ A further channel for the expression of discontent is provided in large companies by the Youth and Apprentice Council, a representative body that apprentices and young employees are under co-determination law entitled to elect.²⁵

In Britain, the separation of employment relations from legal regulation traditionally made any formal right to strike an irrelevancy – which facilitated the launching by apprentices during the last century of several unofficial strike movements in pursuit of their particular interests (Ryan, 2004, 2010). The legal restrictions placed since 1980 on the right to strike of employees in general mean however that English apprentices can no longer legally launch strikes of their own without the formal support of their trade unions – in which respect their position has become the same as that of regular employees (Brown et al., 1997).

²⁴ That did not prevent apprentices from taking unofficial industrial action during the upheavals of the early 1970s (Andresen, 2009, 2010).

²⁵ www.betriebsrat.com/jav-jugendvertretung-wahl (accessed 21.7.11). Youth Councils can be set up only on the initiative of the relevant employer, works council or trade union. Where present, the Councils narrow further the distinction between apprenticeship and employment, in that their apprentice members are in practice guaranteed to continue to skilled employment in the firm after completing training.

The right of apprentices to strike on their own has in any case become a peripheral issue. More important is whether apprentices may join wider industrial disputes, alongside regular employees. The apprenticeship ideal might suggest that apprentices should be excluded from such disputes, consistent with their status as learners rather than workers. Yet historically both employers and unions have sought the allegiance of apprentices during industrial disputes: employers, to reduce the effect of a strike on production by using apprentice labour; unions, to increase pressure on the employer, by withdrawing apprentices from the workplace.

The tension has played out differently across time and place. In British engineering, the allegiance of apprentices in industrial disputes proved a long-standing bone of contention between trade unionists and employers in the engineering industry. In the protracted lockout of 1922, the two sides strove for the allegiance of apprentices, one-third of whom struck in support of the unions' cause, while the remainder remained at work. The issue was eventually resolved in 1965 by a sector-wide procedure agreement that bound the union to exclude apprentice members from all industrial disputes, in that any apprentice who joined a strike would be disciplined by his or her union, while binding the employer not to use apprentices to do the work of strikers (Ryan, 1999, pp. 46, 50-1). This agreement, in formally disarming apprenticeship after repeated hostilities, harmonised exceptionally with the apprenticeship ideal.²⁶

²⁶ The agreement coincided broadly with the launch of the Engineering Industry Training Board, with its mandate to raise training standards (Senker, 1991). Whether the agreement meant that apprentices stood apart from the strike wave of the ensuing decade has not been established, but that appears unlikely.

In West Germany, the demand for a right to strike for apprentices was contested during the post-war decades. Apprentices' representatives in the metalworking trade union pushed for it repeatedly, encountering strong resistance from employers.²⁷ The issue was eventually resolved by a 1984 decision by the Federal Labour Court, which recognised the right of apprentices to take part in official industrial disputes, or at least in warning strikes and short strikes, as long as apprentices' own terms and conditions – e.g., their pay or their retention by the company after training – were among the issues at stake (Weiss and Schmidt, 2008, § 508). To that extent, and in contrast to the position attained in British metalworking in the 1960s, another aspect of the separation between apprentices and employees was weakened.

Elements of the ideal were however preserved in the 1984 ruling, which imposed specific limitations on the right of apprentices to strike. They are, first, that apprentices may not strike in the time scheduled for their attendance at vocational college (typically a particular day every week) and, second, that participation must not interfere with the final assessment of third and fourth year apprentices. Moreover, the decision on apprentices' participation belongs in practice to the union's local strike committee, not to the apprentices themselves. Even so, the issue remains contested. The two largest German unions both claim that some employers still tell their apprentices that they have no right to strike.²⁸

²⁷ E.g., IG Metall (1971), *Antrag Nr. 34*, p. 356.

²⁸ *Bundesarbeitsgericht vom 12.09.84*, AP Nr. 81, cited by IG Metall (2006) and Verdi (2006); Wien (2009), p. 173; von Bröckel (2010). Thus when the services trade union Verdi called out 450 apprentices, alongside 700 employees, for a second warning strike in April 2011 against a non-union health clinic in Leipzig in pursuit of collective bargaining coverage, the clinic's managers reportedly told the apprentices that they had

Payment systems

Two aspects are considered here: first, whether the apprentice receives from the employer a wage (or salary) or a training allowance; second, whether the apprentice is eligible for bonus pay based on his or her performance at the workplace. The apprentice who is paid a wage rather than an allowance and whose pay depends on work-based performance stands closer to the employee than does one who receives only a flat-rate allowance.

The distinction between apprenticeship and employment is underlined in Germany by the different terms used to denote pay for the two categories. Apprentices are paid an allowance (*Vergütung*); employees, a wage or salary (*Lohn, Gehalt*). Switzerland sees a similar distinction, but with a less marked difference in terminology, as apprentices' pay is termed an 'apprentice wage' (*Lehrlingslohn*). In both countries, the difference in status between the apprentice and the regular employee is underlined by the terminology.

The distinction between apprentices and employees was constrained in post-war West Germany by their having the same mode of pay setting: collective bargaining (*Tarif*) at sector-region level. Nevertheless, some aspects of pay bargaining for apprentices remained different from those for employees. First, apprentices' allowances were set in separate collective agreements from those that fixed employees' wages, so that increases in employees' wages

no right to strike, and only 100 apprentices participated, some of them only during the lunch break

(<http://jugend.verdi.de/news/zeichen-stehen-auf-streik>; accessed 18.7.11).

were not always accompanied by increases in apprentices' allowances.²⁹ Second, the collective agreements for apprentices stipulated, as subsequently required by the 1969 Act, a monthly rate, in contrast to the hourly ones set for manual employees – which points to the difference in the working hours expected of the two categories.³⁰ Third, apprentice allowances were – and still are – set as fixed sums of money, not percentages of the base rates of skilled employees, as became the practice in post-war British engineering, with its weaker distinction between apprenticeship and employment. In all of these details, German practice supported a stronger distinction.

Some erosion occurred in the first attribute. From the 1960s on, apprentice allowances came increasingly to be set in the same negotiations and included in the same collective agreement as employees' wages and salaries, thereby ensuring that apprentices were routinely covered by general pay increases. Practice and timing varied by region and sector. For example, in metalworking, the two agreements were unified as from 1963 in Bavaria, whereas in Hesse they remained separate through the 1970s – albeit by then with identical dates, indicating their joint negotiation within a single pay round.³¹

²⁹ In Hesse (e.g., IGM 1954), apprentice allowances remained unchanged in five post-war years that saw an increase in employees' wages (1951-3, 1956, 1958).

³⁰ Protective legislation also came to rule out the working of overtime by apprentices aged less than 18 years (BMJ, 1976, §8(1)).

³¹ The convergence of pay setting for apprentices and regular employees in post-war Germany increased the scope for German trade unions legally to call out apprentices in industrial disputes, as the issues involved in general *Tarif* negotiations became more prone to affect apprentices as well as employees.

Switzerland had retained a sharper distinction between the setting of apprentices' pay and that of employees' wages. If the coverage of collective bargaining for employees is low, it is negligible for apprentices, whose pay is in effect left to individual employers to decide. The result is a firmer separation of apprentices from regular employees. Employers not only typically exclude apprentices from regular pay increases for employees, but in some cases even keep their allowances unchanged for a few years at a time. The extent to which pay setting for Swiss apprentices reflects market clearing, inertia, or employer power remains to be determined (Ryan et al., 2010, 2011; Muehlemann et al., 2011).

By contrast, British apprentices have traditionally been paid a 'wage' (or salary), just like a regular employee, and, by way of the scale rates that have since the 1960s set their pay as a percentage of skilled pay, they have shared in general wage rounds for employees.³² The requirement of employee status for Apprentices, associated with the abolition of 'programmed' Apprenticeships, in which a specialist training provider subsumes completely the employer's role, means that all Apprentices must now be paid a wage, and none simply a training allowance. Although much of the training supported by the Apprenticeships programme hardly constitutes apprenticeship, as defined above, the elimination of 'non-waged' variants as of 2011 will contribute further to the convergence of Apprentice and employee status (NAS, 2011).

³² Percentage scale rates for engineering apprentices go back at least to the interwar period, when local employers' associations used them to set maximum rates of pay. Unionisation led in the 1930s to their conversion to minimum rates, but their importance was weakened temporarily by the use of flat-rate wage increases in 1952 and 1960 (Ryan, 2004).

The second issue concerning payment systems is whether, in companies that pay their employees performance-related bonuses, apprentices also receive bonus pay. Insofar as it is their position as learner that is the priority, not that as producer, according to the apprenticeship ideal apprentices should not receive bonuses for production-related performance at the workplace. This is because incentive pay encourages both the employer and the apprentice to restrict training to specialised work tasks, in which high output and earnings can be obtained.

In post-war Britain, incentive bonuses were paid to many metalworking apprentices: in 1960, to 47 per cent in engineering, and 76 per cent in shipbuilding.³³ A recurrent demand by apprentices' representatives was the removal of apprentices from bonus schemes, in order to discourage task specialisation during training.³⁴ The share of apprentices who received performance bonuses declined strongly after 1964, in association with the raising of training standards by the Engineering Industry Training Board (EITB), but not to zero. The EITB may well have disfavoured bonus pay as inimical to training quality, but it appears not to have made eligibility for its training grants depend on the reduction of piece-working by apprentices.³⁵

³³ Ryan (2004), Table 4, and (2010), p.341.

³⁴ Motions calling for the abolition of bonus pay for apprentices featured on the agendas of nine of the nineteen Youth Conferences held by the largest engineering union between 1946 and 1964. The motions encountered regular opposition because of the interest of piece-working apprentices in raising their earnings during training, but they failed to carry only in 1949 and 1950 (AEU, 1950).

³⁵ No record of EITB practice remains available, but the principal historian of the Board, Peter Senker, recalls in a personal communication no evidence of any such policy.

In post-war Germany, the employment of apprentices on piecework was ruled out by the 1976 Youth Labour Protection Act. The underpinning thereby provided to the distinction between apprenticeship and employment was however limited: the legislation applied to employees as well as to apprentices, and it was confined to the under-18s.³⁶ The latter has meant a decline in the Act's relevance to the status of the apprentice, associated with the secular rise in the median age of entry to apprenticeship, which reached 19.4 years in 2007 (Ryan et al. 2010, Table 10).³⁷

Nowadays, in Britain, Germany and Switzerland alike, some, and possibly many, apprentices receive performance-based payments. A recent study of 45 matched establishments in two sectors (engineering, retailing) in Britain, Germany and Switzerland found that slightly more than half of them paid their apprentices some kind of performance bonus, and that there appears to be little variation in its incidence by country or sector (Table 1).³⁸

³⁶ BMJ (2008), §23 (*Akkordarbeit, tempoabhängige Arbeiten*).

³⁷ An assumption that apprentices (and skilled employees) receive no bonus pay has applied in all the surveys of employers' training costs that the Federal Vocational Training Institute (BIBB) has conducted since the 1970s, despite the decline in the share of apprentices covered by the 1976 Law (e.g., Beicht et al., 2004, pp. 22-23; Wenzelmann et al., 2009).

³⁸ As the sample of employers was not randomly chosen, the evidence in Table 1 may not be highly representative. The table excludes the ten British retailers in the original study, none of which trained Apprentices in the relevant establishment or division.

INSERT TABLE 1 AROUND HERE

In some of these companies, the use of incentive pay for apprentices reflects simply their passive inclusion in group bonus schemes for employees in the department or plant in which they work – as notably with commission pay in retailing. Yet even that practice implies an underlying similarity in the perceived positions of apprentices and employees. More striking still, one-third of the employers (15 out of 45), and most of the Swiss engineering ones (six out of eight), paid *individual* bonuses to their apprentices.³⁹

Practice comes closer to the apprenticeship ideal in the eight companies that explicitly exclude apprentices from their production-based bonus scheme for employees. Managers explain their exclusion in terms of the difference between the status of the apprentice, seen as primarily a learner, and that of the employee, seen as a producer, and in particular of the tendency of bonus pay to reduce skill learning by increasing task specialisation. By contrast, some of the other employers view the apprentice's exposure to the work pressures created by performance bonuses as an important ingredient of skill learning.

Although none of these companies' bonus schemes applies to performance in vocational college alone, in one-third of them the performance in question involves part-time vocational education as well as production. All are in engineering; retailing managers appear to attach less importance to apprentices' learning in part-time education. Those engineering

³⁹ As some of the firms that pay production-based bonuses to their apprentices exclude apprentices during the first phase of their training programmes, the evidence overstates somewhat the departure from the ideal.

companies give weight to both the education and the production dimensions of the apprentice's role, and thereby conform to the ideal more closely than do the others.

The resurgence of performance-based bonuses for apprentices, if that is what it is, should not however be interpreted as indicating a return to the repetitive work tasks and production-oriented training of much post-war British apprenticeship. In these companies it represents rather a means of encouraging the apprentice's responsibility for his or her own learning and career development, part of Human Resource Management rather than Taylorist practice (Ryan et al., 2007).

Finally, apprentice pay may be covered by a statutory minimum wage. Where that is so, the workplace aspect of the role of the apprentice is emphasised, not the student one. The imbalance is in some countries countered with a sub-minimum wage for apprentices, or for youth employment in general (Ryan, 2001a). The absence of a national minimum wage in Germany and Switzerland means that there is nothing there to weaken the status of the apprentice as a learner.⁴⁰ In Britain, by contrast, the National Minimum Wage covers Apprentices as well as employees. Some distinction between Apprenticeship and regular employment is however present, in the entitlement to only the lowest sub-minimum rate for Apprentices who are 16-18 year old or in the first year of their programmes, and to less than

⁴⁰ Although the extension agreements that previously required non-union firms to pay the collectively agreed rates for apprentices have been weakened, non-covered employers are still required to pay at least 80 per cent of those rates (Beicht, 2006).

the full adult rate for other Apprentices aged less than 21 years.⁴¹ To that extent, the apprenticeship ideal retains some influence.

Relative pay

The final aspect of the positioning of the apprentice between the full-time student and the employee is the level of apprentices' pay: the higher it is, the closer the apprentice stands to the employee; the lower, the closer to the full-time student.

Apprentice pay has to be standardised for differences in general pay levels across time and place, which is normally done by reporting it relative to the pay of full-time employees in the same occupation, sector, country and year.

Historically apprentice pay was low compared to that of skilled employees. In British and German metalworking around the middle of the last century, an apprentice received less than half the rate of a skilled employee, even in the final year of training: 47.5 per cent for fifth year apprentices (20 year olds) in Britain in 1940, and 33 per cent for fourth year apprentices (usually 19 years old) in North-Rhine/Westphalia in 1955 (Ryan 1993, Figs. 2A, 2B1). Apprentices at earlier stages of training were paid still less. The difference in pay between apprentices and employees was clearly substantial.⁴²

⁴¹ LPC (2009), ch. 6; Ryan et al. (2011); the Apprentice sub-minimum is 42 per cent of the adult rate (www.direct.gov.uk/en/Employment/Employees/TheNationalMinimumWage/DG_10027201; accessed 28.7.11).

⁴² The relative pay of apprentices in post-war British metalworking is still lower when measured in terms of earnings instead of base rates (Ryan, 2010).

That largely remains the case in Switzerland and Germany, but not in Britain.

Returning to the matched sample of engineering companies in the three countries (Table 1, above), the relative pay of apprentices in Britain is nowadays much higher than it was sixty years ago, but it has remained low in Germany and, particularly, in Switzerland (Table 2). In the British engineering plants studied, apprentice pay starts at almost half the skilled rate and averages nearly two-thirds over the training period as a whole. In Switzerland, the comparable apprentice starts at only one-eighth and averages only one-fifth, taking the four years of training as a whole. Germany lies in between, with relative pay rates starting somewhat below one-third and rising only slowly thereafter.⁴³ To that extent, the differentiation of the apprentice from the employee is weaker in Britain than in Germany and Switzerland. The low pay of Swiss apprentices indicates their particular closeness to full-time students, consistent with a median starting age of 17.6 years, nearly two years younger than for their British and German counterparts (Ryan et al., 2011, Table 10; Teuber et al., 2011).

INSERT TABLE 2 AROUND HERE

Apprentice pay is typically studied by economists as a determinant of the distribution of training costs between employers and apprentices. Considered here as evidence of the positioning of the apprentice between the student and the employee, it too suggests a closer approximation to the latter nowadays in Britain than in Germany or Switzerland.

⁴³ As the data in Table 2 are calculated using the pay of newly qualified rather than typical skilled workers, they are not strictly comparable to those for Germany in the 1950s, for which apprentice pay is standardised by the pay of the representative skilled worker (*Ecklohn*), not the newly qualified one.

4.2 Determinants

The four attributes of apprenticeship discussed here show interesting differences across time and place. Many changes are visible over time – in particular, a tendency for apprentices' status to move closer to that of employees in Germany, Britain and Italy, and to have become particularly close thereto in Britain and Italy. By contrast, in Switzerland there has been less change, and in particular less convergence on employee status. What might account for such differences and changes? This section suggests some answers.

The first point is that, while the apprenticeship ideal may be clear as a concept, it is not easily realised in practice. A distinct and autonomous status for the apprentice, straddling the worlds of the school and the workplace, is not easily established and maintained. That difficulty reflects three factors: the transitional nature of apprenticeship, the economics of training, and political conflict.

First, apprenticeship involves a transition – between youth and adulthood, from the school to the workplace, and from full-time student to regular employee. Its transitional nature facilitates differences in the relative importance within the whole of participants' prior status (student) and subsequent status (employee).⁴⁴ The point can be illustrated by Britain in the 1940s, when the Engineering Employers' Federation recommended to member firms that

⁴⁴ The recent growth of adult Apprenticeships in England represents the shedding of yet another of the traditional social functions of apprenticeship, viz. as a vehicle for moving from childhood to adulthood (Snell, 1996).

they offer part-time vocational education to apprentices during the first two years of training (i.e. to age 18), but not during the subsequent three years, as demanded by trade unions (Ryan, 1999, p. 44). The employers' stance was consistent with a view of the younger apprentice as closer to the student and of the older one as closer to the skilled employee. It contrasted to the requirement in German and Swiss practice for participation in part-time vocational education throughout the training period.

The transitional aspect is visible nowadays in the increase in the share of their time that apprentices spend in more productive activities as they go through training – as found by studies of training costs for British, German and Swiss apprenticeship (Hasluck et al., 2008, p. 15; Dionisius et al., 2009, pp. 12-13). Indeed, as apprentices near the end of training they may find themselves treated by their employers, and view themselves, as skilled labour in all but name – and the discrepancy between their productive contributions, on the one hand, and their status and pay, on the other, can generate discontent.⁴⁵

Second, the economics of training points to the skill requirements of occupations and training programmes as an influence on the position of the apprentice. When apprenticeship involves the prolonged learning of a costly transferable skill, as, e.g., in heavy engineering nowadays, market forces favour low apprentice pay. At the other pole, when 'apprenticeship' represents little more than the repackaging of bespoke on-the-job training programmes for

⁴⁵ The difficulty was marked in British engineering in the Second World War. The 1941 strike movement of engineering apprentices was fuelled by the frequency with which fourth and fifth year apprentices found themselves supervising recently inducted female 'dilutees', who, unlike the apprentices themselves, received the skilled pay rate for their work despite having undertaken less training (Ryan 2004, p. 57).

current employees, as typically in sales Apprenticeships in British retailing, market forces generate little difference in trainees' pay relative to that of regular employees. The former situation lies close to that of the full-time student, the latter particularly close to that of the regular employee.⁴⁶

The third factor is political conflict, broadly construed, which continuously shapes and reshapes institutions. The status of the apprentice is pulled to and fro between that of the employee and that of the student by the interests of employers, trade unions, vocational teachers, and public regulators – and particularly by the relative power of employers. A leading example concerns the upgrading of the component of part-time vocational education. That occurred in both Britain and Germany only after prolonged struggles between educators, trade unionists, and public officials, on the one hand, and employer representatives, on the other. The conflict was resolved satisfactorily in each country only in the 1960s, at a time of exceptional influence for social democratic politics.⁴⁷

Some of the changes in the standing of apprentices discussed in the previous subsection can be understood in similar terms. Employee status and the right to strike were promoted for apprentices in Germany by trade unions and resisted by employers, as were the curbing of incentive pay and the raising of relative pay for apprentices in Britain. Upsurges of apprentice discontent were associated, primarily in Britain but also in Germany, with increased relative pay for apprentices (Ryan, 1993, 2010).

⁴⁶ Stevens (1994), Dustmann and Schoenberg (2010), Ryan et al. (2010).

⁴⁷ Taylor (1981); Thelen (2004); Zeitlin (2008); Bussemeyer (2009b).

Divisions within the conflicting camps matter too. Employers themselves often disagreed about the issues – e.g., in Britain, about the response to trade unions’ demands for the right to represent apprentices, and about support for compulsory part-time education.⁴⁸ Similarly, union policies have differed greatly from context to context, ranging from the exclusion from the workplace of all non-employment contracts for youth, as widely encountered in Italy, to their regulated inclusion, as in Germany and Britain. Given that, German unions proved more willing than their British counterparts to restrain the pursuit of higher pay for apprentices, as part of their stronger commitment to high training quality.⁴⁹

5. Conclusions

The ideal of apprenticeship that this paper has adopted – the integration of theory and practice, the classroom and the workplace, in programmes of vocational learning – focuses on a central attribute of vocational education and training systems. It offers a way of describing, analysing and evaluating differences in those systems across time and place. It is grounded in the aspirations of humanist educators, and in the approximation to those aspirations by the training practices of the German-speaking economies, as well as those in metalworking in modern Britain. It is explicitly normative, in evaluating the variety of practice that goes nowadays under the rubric of ‘apprenticeship’, and asking how much of it truly constitutes apprenticeship.

⁴⁸ Zeitlin (2008).

⁴⁹ Garonna and Ryan (1991), Marsden and Ryan (1991).

This paper has analysed the extent to which the ideal is realised in practice, in terms of apprentices' contractual status, relationship to industrial disputes, payment systems, and pay levels. The evidence presented here is partial and its interpretation speculative. Nevertheless, it suggests that even the closer approximations to the ideal stand some distance from it – as exemplified by the contractual status and the right to strike of German apprentices. The closest approximation to the ideal among the four countries considered here is found in Switzerland; the furthest from it, in Italy, with Britain in close proximity thereto.

Such outcomes may be understood in terms of: the transitional nature of apprenticeship itself; the economics of training; and the conflicting interests of the social actors who have an interest in apprenticeship – employers, trade unions, educators, public officials, politicians, and apprentices themselves – and who seek to mould it to their own interests.

The ideal itself has limitations. It is narrow, focusing on a single, educational, dimension of a multi-dimensional phenomenon. It clashes with other values: for example, advocates of lower income inequality may favour employee status for Apprentices despite its inconsistency with the apprenticeship ideal. The ideal is ahistorical. The needs of both young people and the economy may change in ways that alter its appeal – though arguably contemporary changes should increase its appeal, given the growth of both the general educational attainments of young people and the skill requirements of the economy. Lastly, differences in the implementation of the ideal are to be expected as a result of differences in how apprenticeship programmes are regulated, specifically as part of employment relations.

Nor will the ideal appeal to proponents of the non-educational variants of ‘apprenticeship’, for whom the requirements of occupational competence need not involve part-time vocational education. Controversies over the ideal’s acceptability cannot readily be resolved, but the ideal itself may at least sharpen the focus. For example, although the complexity, opacity and mutability of England’s Apprenticeships programme and its Italian counterparts impede their evaluation, the ideal suggests a way to reduce that difficulty.

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Table 1. Incidence of performance-related pay for apprentices in matched establishments in two sectors and three countries

Number of establishments (companies) in category

		Companies paying bonuses to any apprentices				Performance criteria used (individual bonuses only)			Number of companies
		Individual	Group	Both	Either	School only	Workplace only ^b	Both	
Engineering	GB ^c	1	5	1	5	0	0	1	9
	DE	2	4	2	5	0	1	1	8
	CH	6	4	4	6	0	1	5	8
Retailing ^a	DE	2	3	0	5	0	2	0	10
	CH	4	2	0	6	0	5	0	10
Both	All	15	18	7	27	0	9	7	45

Source: Ryan et al. (2010), Table 5

Notes: a. British retailing is excluded, as no Apprentices were present in the relevant establishments

b. Includes commission pay in retailing

c. Participants in the Apprenticeships programme (Level 3)

Table 2. Relative pay of engineering apprentices in 24 companies, 2008-09 (%)

Base rate of pay as percentage of that of newly qualified skilled employees in the same occupation and establishment

	Year of training					Number of cases
	1	2	3	4	All ^d	
Britain ^a	48.5	58.5	68.3	78.5	63.5	8
Germany ^{b,c}	30.5	32.2	34.5	36.3	33.4	8
Switzerland ^b	12.4	16.0	21.5	27.9	19.5	8

Source: Ryan et al. (2010), Table 7

Notes

a. Participants in the Apprenticeships programme (Level 3)

b. Includes 13th month pay (*Weihnachtsgeld*) and holiday pay (*Urlaubsgeld*) where paid.

c. Establishment (or company) level base rates, where different from *Tarif* rates

d. Unweighted average across all years of training