Recontextualisation and the education-work relation

Jim Hordern

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Jim Hordern

Bath Spa University

j.hordern@bathspa.ac.uk

Abstract

This paper foregrounds the notion of recontextualisation (the selection, appropriation and transformation of knowledge) as a means of better understanding the relation between education and work in the context of the vocational and professional curriculum. Drawing on Bernstein and related work in the sociology of educational knowledge, in addition to studies of vocational and work-based learning and the philosophy of expertise, it is argued that a nuanced socio-epistemic analysis of how knowledge is shaped and reshaped in educational processes is vital for understanding how occupationally-orientated curricula are constituted, and for how curricula are translated or enacted in pedagogic contexts. To elaborate on this, 'macro', 'meso' and 'micro' level institutional and organisational relations that have bearing on the relationship between education and work are outlined. This leads into a discussion of (i) how occupational curriculum knowledge is recontextualised in various forms of education-work partnership; and (ii) how that knowledge is reshaped through pedagogy and workplace practice.

Introduction

The relationship between education and work is the subject of considerable debate and political attention. It is difficult to escape the conclusion that national educational systems are increasingly geared towards industrial demands, or at least policy makers' interpretations of those demands. Reforms to education in England, for example, are justified by a perceived need to compete in 'the global race' for skills, and scrutiny of the performance of students and institutions against international benchmarks is a staple of media reporting. In education for professional and vocational occupations, a category that covers a considerable amount of post-compulsory education, the lines between what is clearly 'education' and what is 'work' are often blurred. Work-based learning often has a central role in these forms of education, and educational institutions frequently engage with, or make reference to, employers, professional bodies, associations and government agencies in the development of curricula and qualifications. The dynamic of the relations between educational institutions and the occupation may, however, vary considerably by national, sectoral or occupational context, shaped not a little by how the relationship between education and work is conceived and enacted.

While the lines between education and work may often be blurred it is important to emphasise the distinctive logics and parameters of these two 'domains'. The production and dissemination of specialised knowledge requires particular social and pedagogic conditions (or forms of 'sociality' (Young 2008)) which are rarely found in the workplaces of most organisations or in the social relations through which work activity is conducted. The 'education domain', in harbouring the disciplines, sustains the conditions through which bodies of knowledge can be conserved, reviewed and iterated in ways that acknowledge the historical development of that knowledge and its fallibility (Young and Muller 2013; Muller 2009). Disciplined management of that knowledge requires both an inferential and procedural capacity, knowing how to make inferences from key propositions to find your way around conceptual fields, and how to apply appropriate procedures to judge new claims to knowledge (Winch 2010; Muller 2014), and this capacity is constituted at both the level of the individual and the disciplinary community. This knowledge is then relayed, recontextualised and pedagogised though educational institutions. Importantly, the 'education domain', broadly defined, continues to uphold values of 'social justice', 'truthfulness', 'inclusion' and 'individual development', captivated by certain enduring educational problematics and concerns (Biesta 2010; Lauder et al. 2009), even though notions of 'truthfulness' are not always accompanied by a respect for 'truth' (Young and Muller 2007).

However, commitments to disciplined reasoning, truth and truthfulness, social justice and individual development are often marginal within the domain of 'work'. While work contexts are varied, prevailing market and bureaucratic logics which champion effectiveness and client value do not sit easily with educational pedagogic relations and socio-epistemic processes of disciplinary knowledge production and recontextualisation (Bernstein 2000). Although there are exceptions where there are manifestations of professional logic (Friedson 2001), workplace logics are often at cross purposes or even antithetical to many educational values

and processes, and yet these differing logics and values are increasingly brought into close relation as a consequence of how education is cast in relation to the economy.

It is the argument of this paper that analytical tools developed through the sociology of educational knowledge, combined with insights from studies of learning at work, can be useful in distinguishing the character of the education-work relation. This could lead to a more fine-grained analysis of how that relation eventuates, and better understanding of the implications for practitioners, students, educational programmes and occupations. This paper aims to contribute to such a framework by concentrating on how knowledge and practices are 'recontextualised' between and within sites of education and work. Central to the approach is the argument that it is not only knowledge that needs to be differentiated but also practices, with some work contexts offering better realisation of specialised knowledge and better supporting professional judgement. This entails examination of forms of the 'workplace curriculum' (Billett 2006) and the context of workplace activity, which is itself shaped by the political economy of work (Felstead et al. 2009).

While what happens in workplaces cannot replace the role of educational institutions, learning in workplaces is a constituent element of professional and vocational education – you cannot acquire certain forms of expertise without some acquaintance with the 'subject matter' of your profession or vocation (Winch 2010). And this subject matter is always underpinned by specialised forms of knowledge to some extent – even the most routine and outwardly rudimentary form of work in industrialised society is only possible because of the production and recontextualisation of specialised knowledge. The cleaning and roofing products we use have been produced through the application of recontextualised specialised scientific knowledge – and we must trust the processes that give rise to this knowledge in order to carry out seemingly elementary tasks. A by-product of the historical specialisation of labour is the creation of occupational roles that can be insulated from engagement with specialised knowledge that underpins the practice of those roles. Unfortunately, this has resulted in some governments and employers exploiting this to stimulate the development of occupationally-orientated educational programmes that lack access to specialised knowledge, with implications for social justice and occupational participation (Wheelahan 2007; Young 2006), and for the development of occupational expertise.

This paper now proceeds in three parts. The first part sets out a 'socio-epistemic' approach to analysis of the education-work relation in terms of the constitution of professional and vocationally-orientated knowledge. This entails developing an outline cartography of how education and work relate at a 'macro', 'meso' or 'micro' level. This also involves asserting that it is not only knowledge that needs to be differentiated in such an analysis, but also practices, and through such differentiation we can start to understand how forms of specialised knowledge can 'surface' and 'be surfaced' within occupational practice. The second part unpacks how notions of recontextualisation can be utilised to illuminate the education-work relation at the 'meso-level', in terms of engagement between institutions, organisations and other parties interested in the work of the occupation. This is then illustrated through examples of meso-level recontextualisation in different contexts. Finally, in the third part, the focus turns briefly to the 'micro' level to make some observations about

how forms of recontextualisation in workplaces can affect learning through closer attention to how conceptual structure and practice dynamics may orientate forms of pedagogy.

A socio-epistemic approach to the constitution of professional and vocational knowledge

The development of this particular approach to the constitution of professional and vocational knowledge has a number of underlying propositions.

(i) That it is important to differentiate between forms of specialised and non-specialised knowledge, and this can be achieved through scrutiny of the structure and purpose of that knowledge (Bernstein 1999, 2000; Young 2008; Muller 2009).

(ii) That specialised knowledge is 'emergent, revisable' and yet 'material' and 'real' (Young and Muller 2013; Moore 2007), is husbanded by forms of sociality in disciplinary communities, and this is also important for considerations of professional knowledge (Young and Muller 2014), and that of all occupations (Muller 2009).

(iii) That the structure of knowledge is iterated through specific social processes, and these differ by discipline (Bernstein 1999). The particular structure of knowledge provides a guide to how knowledge can be recontextualised in curricula and in pedagogy (Young 2006; Shalem and Slonimsky 2013; Gamble 2014), of which more below.

(iv) That in addition to differentiating specialised and non-specialised knowledge, it is also important to differentiate between specialised and non-specialised practices[1]. Practices can be differentiated by the extent to which they are underpinned by disciplinary (or 'disciplined') knowledge and by the extent to which that knowledge is recognised and made explicit in that practice (Hordern 2015, 2016c). This notion of discipline, in its occupational form, generates the conditions for commitment to the quality of practice – to the sustenance of 'internal goods' (MacIntyre 1981/2007).

(v) Finally, various sociological and philosophical concepts may be particularly useful in identifying the character of the education-work relation, appreciating how co-operation arises and why conflicts or 'culture clash' (DIUS 2008, 27) emerge. Some will be employed or referred to in the course of the discussion, including - the 'logics' of professionalism, the market and bureaucracy as developed by Friedson (2001); knowledge structures, and classification and framing as a means of identifying forms of power and control Bernstein (1971, 2000); MacIntyre's (1981/2007) notion of 'internal goods' and co-operative activity as fundamental to human practices. What these concepts have in common

[1] Practice is understood here roughly in MacIntyre's terms (i.e. as a 'socially established co-operative human activity' (2007, 187) with 'internal goods' and a normative structure, criteria and standards of excellence.

> is a recognition that certain social conditions produce forms of knowledge and practice that have particular social and occupational value.

Bernstein's (2000) concept of recontextualisation is central to this socio-epistemic approach. Recontextualisation involves the selection, appropriation and transformation of knowledge (Bernstein 2000; Barnett 2006), and can be seen as the process by which knowledge moves from a 'knowledge producing' discipline into a curriculum. This process of selecting, appropriating and transforming knowledge may or may not reflect fidelity to the underpinning structure of that knowledge in its disciplinary form (Hordern 2014a). This will depend on the extent to which the recontextualising 'agents' (which may be organisations, institutions and/or individuals) involved in developing the curriculum recognise and adhere to the disciplinary 'rules' that guide recontextualisation (Bernstein 2000; Young 2006). It is disciplinary knowledge that provides the 'rules for making explicit the grounds for an explanation' (Young 2006, 118), but a process of curriculum development leaves open the possibility for these rules to be misinterpreted or downgraded, and for conceptual structure to be misconstrued. The rules are specific to the discipline concerned – each body of knowledge has its own means of configuring propositions, and possesses distinctive procedures through which the validity of knowledge is recognised (Bernstein 1999; Winch 2010; Muller 2014). Recontextualisation processes from discipline to curriculum may be continual, intermittent or 'one off' with significant implications for the character and currency of curricula (Hordern 2014a). Thus curricula in some disciplinary areas may quickly become out of date or misleading if newly produced knowledge is not incorporated into the curriculum in ways that cohere with existing concepts.

The constitution of occupational knowledge involves recontextualising knowledge and practices from relevant disciplines, but orientating these to the purposes and problems of what is perceived as the problems of occupational practice and the purpose of the occupation (Barnett 2006; Muller 2009). In occupational fields recontextualisation processes often involve multiple stakeholders with interests in the work of the occupation, including professional bodies, employers and governments in addition to educational institutions and individual educators, and thus concerns of 'work' rather than 'education' may predominate. These stakeholders may neglect to recognise knowledge structure and disciplinary origin, or may chose to ignore it. This can result in unintentional or intentional errors of recontextualisation (Hordern 2014a) when forms of knowledge that lack specialised disciplinary qualities are included in the curriculum. Recontextualisation is complicated in occupational communities by modes of sociality that involve a wide range of stakeholders with varied interests, leading to potential difficulties in achieving a systematic approach to revising the occupational knowledge base that observes the specifics of knowledge structure.

The diagram below attempts to identify various factors that influence the constitution of professional and vocational knowledge. Inevitably it is a simplification and approximation. Nevertheless, it serves to illustrate some aspects characteristic to the fields of education and that of work. The framework identifies factors which are broadly influential at what could be termed 'macro', 'meso' and 'micro' levels, in an analytical structure that is influenced by Bernstein's (1990, 2000) pedagogic device. This scalar typology needs to be interpreted

cautiously – the phenomena or aspects of social organisation identified are attributed to a level in respect of the extent of range of contexts to which their influence extends; nevertheless they are constituted both within and beyond their 'level'. Thus at the macro level policy, systemic and political economy factors predominate, which all have influence across a wide range of specific contexts. While at the meso level, processes of recontextualisation are enacted within and between the domains of education and work through partnerships between organisations and institutions, and through the dynamics and culture extant within those institutions and organisations and the systems in which they are located. Finally, at the 'micro-level' we have specific forms of enacted curricula and pedagogic practice that play out in specific contexts within and between educational and workplace settings. As Bernstein clarified with the pedagogic device, the micro contexts are strongly influenced or regulated by the fields of production and recontextualisation (at the macro and meso levels). However, this does not discount the potential for considerable variance in micro contexts to eventuate, and therefore in 'outcomes' for those experiencing those micro contexts.

Diagram 1: Relations between the domains of education and work

<table>
<tr><td>Domain / Level</td><td>'Education'</td><td>'Work'</td></tr>
<tr><td rowspan="2">'Macro'</td><td>Supra-national and national policies
Education systems
Qualification frameworks
Disciplines</td><td>Industrial policy
Employment policy
Sectors
Employers' representative groups (i.e. CBI in U.K.)
Professional associations</td></tr>
<tr><td colspan="2">-Knowledge production for professions and vocations (involving both domains)</td></tr>
<tr><td rowspan="2">'Meso'</td><td>Educational institutions
Intended curriculum</td><td>Organisations (private, public, voluntary)
Productive system
Expansive-restrictive environments</td></tr>
<tr><td colspan="2">-Partnerships between institutions, organisations (and possibly government)
-Knowledge recontextualisation for professional and vocational curricula (involving both domains)</td></tr>
<tr><td>'Micro'</td><td>Classrooms / learning spaces
Enacted curriculum
Pedagogy
Specialised and non-specialised educational knowledge and practices
Pupils 'everyday' knowledge</td><td>Workplaces
Workplace curriculum (Billett 2006)
'Workplace pedagogy'
Specialised and non-specialised knowledge and practices
'occupational everyday'</td></tr>
</table>

	Teachers Students Peer groups	Mentors, supervisors, line managers Apprentices/novice professionals/practitioners More experienced workers / colleagues
	-Knowledge and practice 'reproduction' (involving both domains)	

Recontextualisation at the meso-level

The macro level context shapes what is possible at the meso-level in terms of recontextualisation within and between educational institutions and workplaces. Global changes in orientations of education systems towards the perceived interests of the economy, and pervasive forms of 'economics imperialism' (Allais 2012) may constrain the forms of professional and vocational education that are deemed valid by governments, employers and society. The 'education gospel', embedded with an individualist and marketised logic that claims 'education' as the source of 'economic and social and individual salvation' (Grubb and Lazerson 2004, 1) but yet casts it as a supply vehicle for global capitalism, is coupled with a determination amongst governments to impose structures and frameworks on educational institutions that are antithetical to the conditions for the systematic production and dissemination of specialised knowledge forms (Young 2009; Allais 2012). However, it would be a mistake to take an excessively deterministic view of these trends – there is little doubt that nation states and their institutional configurations mediate and rework global trends and frameworks, both through conscious action and due to their particular socio-historical character (Hall and Thelen 2009). Policy borrowing is not exclusively from those countries in the vanguard of the 'neo-liberal' capitalist project (for example Germany plays an influential role in shaping some forms of vocational education in other countries – Barabasch et al. 2009), and educational systems retain a degree of diversity by virtue of their historical development and relationship to the state (Green 1997).

Thus it should be recognised that what happens at the 'meso-level' may vary considerably by nation, sector, and system. Research into specific sectoral dynamics and institutional relationships may reveal particularly productive conditions for an understanding of how 'education' and 'work' can be related. Barnett's (2006) use of recontextualisation in a paper on vocational knowledge and pedagogy provides a helpful starting point for understanding specific education-work articulations at the 'meso-level'. Barnett identifies that for occupationally-orientated curricula it is important to conceptualise the relationship between contributory disciplinary knowledge and the 'organisational and technological problems' (147) of occupational practice. In essence Barnett suggests that how these problems are conceived strongly influences what aspects of disciplinary knowledge are selected, appropriated and transformed to form a 'toolbox of applicable knowledge' (147) that then can be recontextualised further through pedagogy in vocational educational contexts.

Barnett's model can be appended to reflect the complex social and institutional relations that contribute to the definition of such practice problems. The character of the partnerships and relations between educational institutions, employing organisations, representative bodies and professional associations is likely to strongly influence how 'problems' are determined (Hordern 2014a; 2016b). Certain employer voices may be particularly prominent, to the exclusion of other organisations, slanting problem definition to particular conceptions of the occupation and excluding others, with consequences for which forms of knowledge are recontextualised to the knowledge base. Moreover, the existence of qualification frameworks and policies at a national level may constrain the expression of these problems – and the extent to which, therefore, disciplinary knowledge is considered appropriate for the knowledge base.

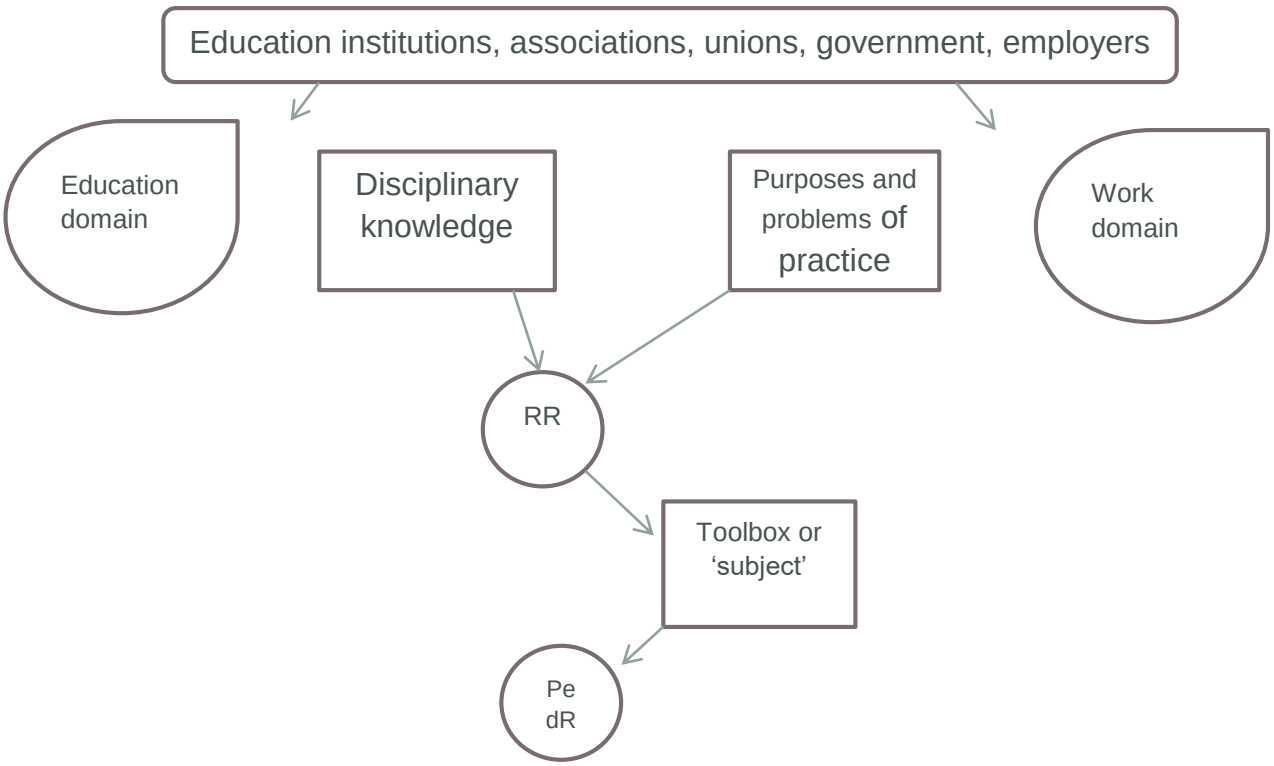
Barnett's model can be further adapted to consider that the constitution of occupational knowledge is as much shaped by how the *purposes* of the occupation are conceived as by how *problems* are defined. Within certain societies the notion of an occupation signifies a societal role and responsibility, a contributory function within a broader social scheme (Winch 2010; Durkheim 1997). Where occupational purposes have broader societal reference points, and jurisdiction over work is underpinned by legislation or licensure, this is likely to influence the extent to which specialised disciplinary forms of knowledge are considered important for practitioner formation within those occupations (Abbott 1988). On the other hand, where the purpose or the function of the occupation is considered more narrowly, on the basis of a 'functional analysis' or Taylorist breakdown of workplace tasks then specialised knowledge may be considered irrelevant. This can also be linked to notions of 'genericism' that may be particularly appealing to certain employers or governments – the construction of frameworks and logics that implicitly or explicitly assert that accumulated knowledge and occupational identities are 'obsolescent' or 'unproductive' (Beck and Young 2005) leaves the way clear for employing organisations to dictate how work is constructed and employment experienced.

The notion of a 'toolbox of applicable knowledge' (Barnett 2006) also requires further discussion. Barnett's conceptualisation could be seen to imply that individual tools can be selected for use independently of others in the toolkit. Knowledge can be identified, selected and 'applied' to a given scenario or context. However, the work of Winch (2010), Abbott (1988) and Young and Muller (2014) suggests that it is the existence of some form of conceptual architecture which can support the making of inferences that is particularly important for occupationally-orientated education. Thus the 'toolbox' could perhaps alternatively be seen as a professionally or vocationally orientated 'subject' with some form of coherent conceptual architecture made explicit to those undertaking an educational programme. This implies that future practitioners will be offered the forms of propositional knowledge and inferential and procedural capability with which they will be able to exercise professional judgement in a wide range of contexts, including those which are currently unforeseen. This could also be seen as offering practitioners the capacity to continually iterate the diagnostic frameworks that will enable them to identify and solve practice challenges (Abbott 1988; Shalem 2014). There may be elements of both 'applied conceptual knowledge'

and ‘principalled procedural knowledge’ in the subject, but conceptuality remains the ‘golden thread’ (Young and Muller 2016, 157-8).

However, in order to recontextualise knowledge appropriately for the development of this subject those ‘agents’ involved in recontextualisation need to be aware of the original disciplinary structure of contributory knowledge and how this can be successfully transformed to support a new knowledge base. An accurate and detailed understanding of the occupational context is vital for the transformation as recontextualisation agents must reshape that knowledge so that is has purchase on relevant practice contexts, and results in the appropriate ‘bundle’ of concepts and principalled procedures in the curriculum (Young and Muller 2016, 157). Arguably this has been achieved successfully in areas of medicine, engineering and architecture, although these knowledge bases continue to grow and require further recontextualisation processes to ensure they reflect both disciplinary advances and changes in the nature of practice (Young and Muller 2014).

Diagram 2 : Recontetxualisation processes at the meso and micro level (developed from Barnett 2006)



RR= Reclassificatory recontextualisation

PedR= Pedagogic recontextualisation

Scenarios of meso-level recontextualisation

As mentioned above, how the purposes and problems of an occupation are defined has a major impact on what forms of knowledge are considered appropriate for professional and vocational education. In some circumstances we see a degree of consensus and stability over time around the purposes and problems of an occupation, with these agreed through occupational communities that possess established associational forms (i.e. professional bodies) and mechanisms for determining problems and negotiating which forms of disciplinary knowledge to recontextualise to meet occupational needs. Hordern (2016a) discusses the role of the Engineering Council in the United Kingdom in bringing together professional bodies, academia and employers in determining practice problems and maintaining the currency of engineering curricula in higher education via control of Accredited Programme Status and the UK Standard for Professional Engineering Competence (UK-PEC) (EngC 2014). However, while this approach to recontextualisation may maintain a form of stability in periods of time when disciplinary knowledge production and practice dynamics change slowly, it may be increasingly difficult where knowledge production becomes ever more specialised, industrialised, and intertwined with the imperatives of purer disciplines, as has progressively developed in professional disciplines such as medicine, and also in engineering (Foray and Hargreaves 2003; Muller 2015). In such circumstances, the mechanisms for identifying problems in practice may continue to operate, but the 'selection', 'appropriation' and 'transformation' of disciplinary knowledge for the curriculum may become increasingly problematic. If there are multiple new advances in knowledge, but only limited space and time in which to incorporate that knowledge within a curriculum, and convey that knowledge to students, then there are risks to curricula coherence and integrity (Muller 2009, 2015).

Different recontextualisation dynamics may be experienced in occupations which are less professionalised and possess a more fluid, or contested, underpinning knowledge base. Professional associations in business service and managerial occupations may experience difficulties with engaging a range of employers in the processes of defining problems and agreeing occupational purposes (Morris et al. 2006), and in identifying which forms of disciplinary-based specialised knowledge are appropriate for their curricula, if any (Hordern 2016a). Some of these difficulties can be linked back to confusion over the purpose of such occupations. Is the overriding purpose to support the needs of a business and its profitability, whatever those needs might be? Or is there a specialised purpose to the occupation independent of supporting market advantage? Such tensions can be seen in the history of personnel or human resource management (HRM), where the 'welfare' or 'personnel' role of the occupation with its concerns for staff development and employee well-being has been increasingly outweighed by requirements for practitioners to act as 'business partners' and meet corporate strategic objectives to most effectively utilise available 'human resources' (Francis and Keegan 2006). Different purposes imply different requirements for forms of specialised knowledge, and suggest a particular orientation to the obsolescence of that knowledge and its relation to the non-specialised 'everyday' knowledge of the particular organisation. They therefore may also imply a specific configuration of education-work

relation. If the occupation is understood as 'personnel' and considered to sustain 'welfare' purposes within organisations, then certain forms of recontextualised psychological and sociological knowledge may be considered important. However, if the occupational purpose is concerned with managing human resources then such knowledge may be considered irrelevant – or less important than facility with the organisational policies and procedures which the practitioner must apply to ensure business effectiveness and continued profitability (Hordern 2014d).

Importantly, there are also occupations whose involvement in public policy leaves them vulnerable to the redefinition of their purpose and the problems of their practice. In England, occupations in the education sector have seen governments take greater control of their professional formation processes (Beck 2008). Teachers have seen their education and training programmes evacuated of disciplinary content (Whitty 2014), and replaced by requirements to demonstrate outcomes according to a set of teaching standards that represent prescribed solutions to problems which teachers have no involvement in defining. The consequence is a recontextualisation process that is strongly influenced by a particular vision of teachers' work, a combination of 'craft' and 'technique' that marginalises the development of more specialised forms of expertise (Winch et al. 2015). This can be contrasted with developments in Scotland, where teachers, government and unions have sought and maintained a degree of consensus around the purpose and processes of teacher formation (Hulme and Menter 2011). A focus in Scotland on 'extending the field of responsibility and participation of all teachers' (ibid., 81), in addition to the influential role of the General Teaching Council for Scotland as a representative professional body, suggests that teachers and teacher educators are better able to define the problems of practice, and thus contribute to setting the terms of recontextualisation.

While processes of problem definition may be taking place at a systematic level through occupational communities that involve institutions, employers and professional associations or their equivalent, we can also understand it through analysis of the partnerships and networks that come together to agree the substance of programmes of professional and vocational education. Hordern (2014b) adapted the work of Felstead et al. (2009) on productive systems to model differing relations between higher education institutions, sectoral bodies and employers in the development of higher education for workforce development. This work suggested that certain occupational sectors possess a dynamic which facilitates co-operation with educational institutions and a shared definition of occupational problems that can underpin recontextualisation. However, when individual ad-hoc employer-institutional relationships become the stimulus for new curricula there is a risk that the recontextualisation of specialised knowledge for the occupation is undermined. It becomes more difficult to gain a purview of occupational requirements, and there may be tendencies to rely on the specific organisational perspectives of the employers concerned (Hordern 2014b).

Partnerships between education and work organisations at the meso-level

Building on Hordern's (2014c) use of Bernstein (1971) to iterate the work of Maandag et al. (2007), it is possible to envisage four typical models of partnership working between

institutions and organisations across the domains of education and work for the development and delivery of occupational curricula. This work suggests that to understand the development of the curriculum across differing institutions and organisations it is important to analyse how knowledge is recontextualised and pedagogised both *within* those institutions and organisations and how these processes are affected by *boundaries that exist between them* (Hordern 2014c). Firstly, what could be termed a **work placement model** posits occupational formation as primarily 'front end' or 'front loaded' (Winch and Clarke 2003). Occupational education takes place primarily in educational institutions and is shaped strongly by the concerns and values of the education domain, but with regard to the requirements of the occupation. There are strong boundaries between the sites of education and work, with students entering the workplace specifically as students on placement, independent of the workforce. Secondly, a **complementary partnership model** sees education institutions and employing organisations undertaking distinct roles in conveying particular forms of knowledge and practice as part of occupational formation, but working in partnership to complement each other. There are strong boundaries between sites, and educational institutions may be able to recontextualise considerable volumes of disciplinary knowledge for the curriculum without a substantive obligation to attune this to the circumstance of the occupational practice. Nevertheless, as students spend more time in workplaces under this model the workplace curriculum (Billett 2006) starts to assume greater influence on what gets taught.

A third **network model** sees the roles of education institutions and work organisations as more interchangeable – with institutional and organisational staff sharing roles and co-operating in teams to develop curricula and run programmes; thus knowledge is recontextualised collaboratively. Programmes of occupational formation may achieve strong boundaries that distinguish them from other organisational activities if the collaboration is sufficiently intense. There is potential for programmes developed to be highly 'educational' but also to be closely related to that knowledge particularly valued by work organisations, which may be highly organisationally-specific. Much will depend on the social dynamics of the collaboration. Finally, a **workplace immersion model** represents professional and vocational education by immersion in workplace practice. The workplace organisation takes on the responsibility for providing all education / learning activities for practitioners, and manages the programme on its own terms. There are generally strong boundaries between a dominant domain of 'work' and a marginalised domain of 'education', with implications for what knowledge is recontexualised. The model is often used for experienced employees undertaking advanced education / professional development, and may also be used for training specifically in organisational policies, procedures or culture. Such immersive approaches may also be preferred by those who 'overstate' the role of embodied or participative forms of expertise (Shalem and Slonimsky 2013). In exceptional cases, however, work organisations may share the logics of the education domain (i.e. through a collegiate or co-operative form of organisation). Moreover, workplace immersion could provide considerable access to forms of specialised knowledge, if the practice of the workplace itself is strongly underpinned by specialised knowledge and appropriate guidance from experienced practitioners is available (Hordern 2015; 2016c).

The models suggest differing balances between the domains of 'education' and 'work', and are likely to arise in differing meso-level contexts, and in different occupational sectors. Where there is a sense that the practice of the occupation requires practitioners with extended periods in educational institutions and access to disciplinary knowledge the work placement model may be common. This may also be due to a lack of political or industrial pressure for moves away from 'front-end' approaches to professional formation. On the other hand, where groups of employers or government agencies are trying to assert control over the purposes of the occupation and to define its problematic then there may be pressure to introduce or extend a workplace immersion model. It is also possible to conceive of programmes that have phases that are orientated to different models, although this requires the 'recontextualisation agents' involved to recognise the changes required of their roles.

It is important here to return to questions of 'specialised' or 'knowledgeable' practice, and how its character may shape the processes discussed above. It can be argued that certain practices are more clearly underpinned by specialised disciplinary knowledge than others, although it has been noted earlier that all occupational practice makes use of forms of recontextualised disciplinary knowledge, even if this is not always apparent to practitioners. What is particularly important for induction into a specialised practice is a clear demarcation between those activities that are 'specialised' and those which are not, as this makes explicit for novice practitioners the special value of certain forms of activity for the practice of the occupation.

To give an example – it is important for a health practitioner to be clear about what aspects of her/his work are clearly contributing to her capabilities as a practitioner in the context of the purpose of her occupation. She/he must be aware which activities constitute a general nursing expertise that transcends the nature of her/his particular employment (i.e. planning patient care in the context of patient condition). These specialised activities need to be distinguished from 'everyday' organisational activities that are specific to the organisation in which she/he works and the local environment (i.e. observing particular organisational routines or using software for administrative purposes). While acquiring this everyday knowledge is important for practising her/his occupation in that particular organisational context, this everyday knowledge cannot supplant or be equated to specialised knowledge. The specialised knowledge has a degree of universality, while the everyday has an ephemerality. Engaging with specialised activity requires a facility with specialised knowledge, while the everyday has no such requirements. In some other occupations, for example those of management or recruitment consultancy it has been noted that it is exactly the 'non-specialised' knowledge that is considered particularly important – the networks, personal contacts, 'local' knowledge of specific organisations and their dynamics (Muzio et al. 2011). While this knowledge is clearly non-disciplinary and non-specialised in the terms expressed above, it is accorded considerable value in those contexts where market logics of work prevail despite (or perhaps because of!) its ephemerality.

Recontextualisation at the micro-level

It is at the micro level that students, apprentices and employees engage with occupational knowledge and experience the pedagogised curriculum. Here the pedagogies enacted in educational institutions and workplaces are often different, although it could be argued that the turn towards 'learner-centred' and 'constructivist' pedagogies has strongly impacted all forms of post-compulsory education, aligning institutional and workplace pedagogical contexts more closely, but through pedagogical theories that are inadequate in their conceptions of learning and of 'relevance' (Allais 2012; Gamble 2014).

It is through forms of pedagogic recontextualisation (Barnett 2006) and pedagogic relation that specialised knowledge and practice can be made explicit, and differentiated from the 'everyday' of pupil experience or occupational routines, habits and practices. It is not enough to assume that if specialised knowledge is recontextualised to the curriculum then it can be relayed to pupils, students, learners and apprentices unproblematically. Inappropriate forms of pedagogy can confuse students and apprentices, eliding the boundaries between the specialised and the everyday. The ways in which teachers demarcate what forms of knowledge are significant, juxtapose theoretical ideas and traditions and relate these to forms of experience has considerable impact on what is learnt (Shalem 2015; Gamble 2014). Additionally, the context in which that pedagogy is enacted also matters – the extent to which an institution or a workplace provides the conditions through which learning can take place has a substantive effect on proclivities to learn (Felstead et al. 2009; Billett 2006; Fuller and Unwin 2004).

Following the typology outlined in the earlier section above, programmes of professional and vocational education may take place exclusively 'inside', or hosted by, educational institutions, perhaps with some form of work placement model, or they may take place through some form of partnership arrangement between institutions and organisations in the education and work domains (i.e. the partnership and network models). Alternatively, they may take place entirely at work with limited or no involvement from any kind of educational institution in a workplace immersion model. These differing models may result in different forms of pedagogy, as much as different partnership arrangements. The ways in which knowledge is selected, sequenced, paced and evaluated may alter in accordance with the meso-level relations that have constituted the character of the programme. Where network models have developed we may suggest that pedagogic practices may increasingly transcend institutional and organisational boundaries - the pedagogic practice of the programme itself may attain strong insulation from the customary practices of the institution and the organisation (Hordern 2014c).

Furthermore, who is involved in pedagogic recontextualisation may also vary considerably across educational and workplace settings. While pedagogic relations in an educational institution are usually relatively bounded and transparent, involving tutors, peers and students, the relations that can exist within a workplace potentially involve tutors from both educational and workplace settings, supervisors, mentors, peers and managers. In some work-based programmes such as forms of apprenticeship there may be intra-organisational and

inter-organisational networks through which pedagogic interaction occurs (Fuller and Unwin 2004). The pedagogic complexities also extend to roles. An apprentice, for example, is often considered an integral part of the workforce but must also be seen as a learner. In certain 'productive systems' or organisational cultures which sanction only certain forms of behaviour the learning experiences of worker-students can be constrained by organisational expectations (Felstead et al. 2009). It may not be possible to conceive of alternative strategies or critique current organisational practices if you are enmeshed in a web of workplace relations. Equally, managers may strongly influence pedagogy, bringing imperatives to control and discipline into tension with notions of individual development.

Concluding remarks

This paper attempts, however imperfectly, to provide a contribution towards formulating a multi-scalar framework for better understanding the education-work relation, which could contain within it various schema and tools for investigating knowledge and practice in occupational contexts. The complexity of the task requires further refinement of the concepts, notions and tools identified, and engagement with a range of sectoral and occupational context in differing countries. Recontextualisation is identified here as a useful concept to knit together the levels and contexts, a notion that can expose the socio-epistemic dynamics of knowledge selection and transformation in curriculum and pedagogy across the education-work relation, identifying the what, how and why of ideological tension and contest (Bernstein 2000).

Beneath the arguments outlined here is a claim that it is worth briefly stating. There is no necessary division between the 'education' and 'work' domain; the two can be elided and could co-exist embedded in the same (perhaps MacIntyrean) conception of practice, and within the same institutional structures. The benefits of such an elision or cohesion could be for practices that sustain forms of MacIntyre's (2007/1981) 'internal goods' and 'standards of excellence' to re-permeate across the domains in ways that can help to sustain unity and regenerate 'moral foundations' in an organic vision of social solidarity (Durkheim 1997; Hughes et al. 1996), that recognises the benefits, and necessities, of specialisation for contemporary society. One could see this as an alternative conception in which some of the challenges of the knowledge economy could be met (Guile 2010), or perhaps an alternative conceptualisation of that challenge. There are historical examples of where the two domains have been, at least partially, co-located within institutions – for example in forms of monastic and collegiate order, although solidarity there may often have relied on a shared conception of the sacred that is now redundant (Bernstein 2000). In more recent time, some of the Owenite, Chartist and radical reformers of 19th century England envisaged forms of education that were about individual development as much as socialisation (Johnson 1988), within socialist philosophies that saw education and work as constituent elements of a co-operative organisation. Union movements in various countries have pursued initiatives to re-constitute workplaces as educational environments, although conceptions of 'education' are often built solely around current work roles and responsibilities (i.e. see Forrester 2004 on the U.K.).

The barriers to a greater educational underpinning to work are found in the admittedly rather potent neo-classical/liberal and Taylorist forces that make educational values and a greater recognition of the specialised foundations of practices either inconceivable or unworkable, and also in the reluctance of some 'disciplines' to extend beyond 'narcissistic' institutional constrictions. This is not in any way an argument for any form of dilution of the socio-epistemic conditions in which disciplinarity and specialisation are husbanded – it is an argument for the extension of that disciplinarity into more workplaces and for processes of recontextualisation to support the constitution, and the 'demarcating' and 'surfacing' through pedagogy, of forms of specialised occupational practice.

References

Abbott, A. (1988). *The system of professions: an essay on the division of expert labour*. Chicago: University of Chicago Press.

Allais, S. (2012). 'Economics Imperialism', education policy and educational theory. *Journal of Education Policy*, 27 (2), 253-274.

Barabasch A, Huang S, & Lawson, R. (2009). Planned policy transfer: the impact of the German model on Chinese vocational education. *Compare*, 39 (1), 5-20

Barnett, M. (2006). Vocational knowledge and vocational pedagogy. In Young M. & Gamble, J. (Eds.) *Knowledge, qualifications and the curriculum for South African further education*, 143-157. Human Sciences Research Council: Pretoria.

Beck, J. (2008) Governmental professionalism: re-professionalising or de-professionalising teachers in England. *British Journal of Educational Studies*, 56 (2), 119-143.

Beck, J. & Young, M. (2005). The assault on the professions and the restructuring of academic and professional identities: a Bernsteinian analysis. *British Journal of Sociology of Education*, 26 (2), 183-197

Bernstein, B. (1971). On the classification and framing of educational knowledge. In Young, M.F.D. (Ed). *Knowledge and Control: New directions for the sociology of education*. London, Collier MacMillan, 47-69.

Bernstein, B. (1990). *Class Codes and Control Volume IV: The structuring of pedagogic discourse*. London: Routledge.

Bernstein, B. (1999). Vertical and Horizontal Discourse: An essay. *British Journal of Sociology of Education*, 20 (2), 157-173.

Bernstein, B. (2000). *Pedagogy, Symbolic Control and Identity*. (Rev. edn.) New York: Rowman and Littlefield.

Biesta, G. (2010). *Good education in an age of measurement: ethics, politics, democracy*. Boulder, Co.: Paradigm.

Billett, S. (2006). Constituting the workplace curriculum. *Journal of Curriculum Studies*, 38(1), 31-48

Department for Innovation Universities and Skills (DIUS). (2008). *Higher Education at Work: Higher Skills, Higher Value*. London: HMSO.

Durkheim. E. (1997). *The division of labour in society*. New York: The Free Press.

Engineering Council (EngC). (2014). *The Accreditation of Higher Education Programmes*. London: Engineering Council

Felstead, A., Fuller, A., Jewson, N., & Unwin, L. (2009). *Improving Working as Learning*. London: Routledge.

Foray, D. & Hargreaves, D. (2003). The production of knowledge in different sectors. *London Review of Education*, 1 (1), 7-19.

Forrester, K. (2004). The quiet revolution? Trade union learning and renewal strategies. *Work, Employment and Society*, 18 (4), 413-20.

Friedson, E. (2001). Professionalism: The third logic. Cambridge: Polity Press

Fuller, A. & Unwin, L. (2004). Expansive Learning Environments: Integrating organizational and personal development. In Rainbird, H., Fuller, A. & Munro, A. (eds.)*Workplace Learning in Context*, 126-144. London: Routledge**.**

Gamble, J. (2014). 'Approaching the sacred': directionality in the relation between curriculum and knowledge structure. *British Journal of Sociology of Education*, 35 (1), 56-72.

Green, A. (1997). *Education, globalisation and the nation state*. London: Palgrave MacMillan.

Grubb, N. & Lazerson, M. (2004). *The Education Gospel: the economic power of schooling*. Harvard: Harvard University Press.

Guile D. (2010). *The Learning Challenge of the Knowledge Economy*. Rotterdam: Sense.

Hall, P. & Thelen, K. (2009). Institutional Change in Varieties of Capitalism. *Socio- Economic Review*, 7 (1), 7–34

Hordern J. (2014a). How is vocational knowledge recontextualised. *Journal of Vocational Education and Training*, 66 (1), 22-38

Hordern, J. (2014b). Workforce development, higher education and productive systems. *Journal of Education and Work*, 27 (4), 409-431.

Hordern, J. (2014c). The logic and implications of school-based teacher formation. *British Journal of Educational Studies*, 62 (3), 231-248.

Hordern, J. (2014d). Productive systems of professional formation. In Billett, S., Harteis, C. & Gruber, H. (Eds.) *International Handbook of Research in Professional and Practice-based learning*. Dordrecht: Springer.

Hordern, J. (2015). Teaching, teacher formation and specialised professional practice. *European Journal of Teacher Education*, 38 (4), 431-444.

Hordern, J. (2016a). On the making and faking of knowledge value in higher education curricula. *Teaching in Higher Education,* 21 (4), 367-380.

Hordern, J. (2016b). Regions and their relations: sustaining authoritative professional knowledge. *Journal of Education and Work,* 29 (4), 427-449.

Hordern, J. (2016c). Differentiating knowledge, differentiating (occupational) practice. *Journal of Vocational Education and Training,* 68 (4), 453-469.

Hughes, J., Martin, P. & Sharrock, W. (1996). *Understanding Classical Sociology*. London: Sage.

Hulme, M. & Menter, I. (2011). South and North - Teacher Education Policy in England and Scotland: a comparative textual analysis. *Scottish Educational Review,* 43 (2), 70-90

Johnson, R. (1988). Really useful knowledge 1790–1850: memories for education in the 1980s. In: T Lovett (ed). *Radical approaches to adult education: a reader*. London: Croom Helm.

Lauder, H., Brown, P., & Halsey, A.H. (2009). Sociology of education: critical history and prospects for the future. *Oxford Review of Education,* 35 (5), 569-585.

Maandag, D.W., Deinum, J.F., Hofman, W.H. & Buitnik, J. (2007). Teacher education in schools: an international comparison. *European Journal of Teacher Education,* 30 (2), 151-173.

MacIntyre, A. (2007). *After Virtue: A study in moral theory*. Notre Dame: University of Notre Dame Press.

Moore, R. (2007). *Sociology of Knowledge and Education.* London: Continuum.

Morris, P.W.G., Crawford, L., Hodgson, D., Shepherd, M.M., & Thomas, J. (2006). Exploring the role of formal bodies of knowledge in defining a profession – the case of project management. *International Journal of Project Management,* 24 (8), 710-721.

Muller, J. (2009). Forms of knowledge and curriculum coherence. *Journal of Education and Work,* 22 (3), 205–26.

Muller, J. (2014). Every picture tells a story: Epistemological access and knowledge. *Education as Change,* 18 (2), 255-269.

Muller, J. (2015). The future of knowledge and skills in science and technology higher education. *Higher Education,* 70 (3), 409-416.

Muzio, D., Hodgson, D., Faulconbridge, J., Beaverstock, J., & Hall, S. (2011). Towards corporate professionalisation: the case of project management, management consultancy and executive search. *Current Sociology,* 59 (4), 443-464.

Shalem, Y. (2014). What binds professional judgement- the case of teaching. In Young, M. and Muller, J. (Eds.) *Knowledge, expertise and the professions*. Abingdon: Routledge.

Shalem, Y. & Slonimsky, L. (2013). Practical knowledge of teaching practice – what counts. *Journal of Education,* 58 (1), 67-86.

Shalem, Y. (2015). Scripted lesson plans - What is visible and invisible in visible pedagogy? Paper presented at the 3rd International Social Realism Symposium, Cambridge, U.K., June 29th – July 1st.

Wheelahan, L. (2007). How competency-based training locks the working class out of powerful knowledge: a modified Bernsteinian analysis. *British Journal of Sociology of Education,* 28 (5), 637-651.

Whitty, G. (2014). Recent developments in teacher training and their consequences for the 'University Project' in education. *Oxford Review of Education*, 40 (4), 466-481.

Winch, C. (2010). *Dimensions of Expertise: A Conceptual Exploration of Vocational Knowledge*. London: Continuum.

Winch, C. & Clarke, L. (2003). 'Front loaded' vocational education versus lifelong learning. A critique of current UK government policy. *Oxford Review of Education* 29 (2), 239-252.

Young M. (2006). Conceptualising vocational knowledge: some theoretical considerations. In Young M, Gamble J (Eds.) *Knowledge, qualifications and the curriculum for South African further education.* Human Sciences Research Council: Pretoria, 104-124

Young, M. (2008). *Bringing knowledge back in: From social constructivism to social realism in the sociology of education*. London: Routledge.

Young, M. (2009). Education, globalisation and the voice of knowledge. *Journal of Education and Work*, 22 (3), 193-204

Young, M. & Muller, J. (2007). Truth and truthfulness in the sociology of educational knowledge. *Theory & Research in Education,* 5 (2), 173 – 201.

Young, M. & Muller, J. (2013). On the powers of powerful knowledge. *Review of Education,* 1 (3), 229-250.

Young M. & Muller, J. (2014). From the sociology of professions to the sociology of professional knowledge. In Young, M. and Muller, J. (Eds.) *Knowledge, Expertise and the Professions*. Routledge, London, p 3-17.

Young, M. & Muller, J. (2016). *Curriculum and the Specialisation of Knowledge*. Abingdon: Routledge.