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Organizational epistemology, education and social theory

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Organizational learning or epistemology has emerged in order to manage the creation of knowledge and innovation within contemporary capitalism. Its insights are being applied also to the public sector. Much of the research in organizational learning has drawn upon the discipline of psychology, particularly constructivist theory. Two approaches in organizational epistemology are considered here: Nonaka's theory of knowledge creation, and Engeström's expansive learning theory. Notwithstanding the reference to 'learning', these approaches have so far had little application to schools, especially at the level of pedagogy. But there are indications that re-culturing, 'workforce re-modelling' and inter-agency working are becoming more prominent within the public services in England. In these endeavours, government may come to regard organizational epistemology as an important new procedure in the management of change. Thus far, sociology has had two kinds of 'relationship' with organizational epistemology: first, social phenomenology and ethnomethodology have been of practical use; and, second, critical theory objects to the near-absence of a consideration of power and ideology within the discourse of organizational epistemology.

Introduction

There is said to be a 'new' economy emerging. It marks a number of shifts: first, the value of a product need not only be in its material properties, but also in its design—in this sense, products are becoming 'dematerialized'; and, second, computers now ease the processing of information, thereby allowing us to create knowledge (Kenny, 2001, p. 94). Similarly, in the nascent knowledge and cultural economy, routinized labour processes are giving way to creative 'chaos' and 'self-programmable' working (Castells, 2000, p. 12). The 'creative class' in America now comprises about 30% of the workforce (Florida, 2004, p. 123). In order to be competitive, businesses must generate their own knowledge rather than merely apply someone else's. Knowledge is becoming a traded asset, and its acquisition becomes continuous, and necessary. Thus it is that the adjective 'learning' comes to qualify a range of nouns that hitherto

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have had no attachment to it: namely, organization, worker, city and even society. And there seems to be no end to this ‘learning’; it is ‘lifelong’.

Recently, much store has been set by skills training. This was highly credentialized, with module upon module, as the skills-base was demonstrably built up. In other words, these skills had been acquired as part of a formal curriculum, be it transmitted in the workplace or in the college. But to some extent it was too planned, too structured, too formal and too rigid to be adapted easily to cope with markets that are unstable or with products that are increasingly customized, of short duration and cultural. Of late, however, policy has begun to draw upon theory and research within the field of organizational epistemology. Put simply, the repertoire of dispositions, ‘qualities’ and skills (or *learning*) required of workers—and not just in the so-called knowledge and cultural economy—can be generated continuously through the very organizational procedures and discourse of the workplace. This is by no means new, but what may be emerging is a new hidden curriculum of the workplace, as distinct from the ‘manifest curriculum’ associated with, say, formal staff training; and it works not on the body, but on the self (Casey, 1995). In education there has been remarkably little response to the demands of a knowledge economy, either at the level of pedagogy or of governance and management. For the purpose here, I refer to ‘organizational epistemology’ or ‘learning’ as being to do with a managerial code, not with a pedagogical code of the type associated with a classroom in a formal educational organization.

The argument is in three stages. First, I introduce briefly a number of current strands within organizational epistemology as they apply (or might apply) to educational organizations. These are Nonaka’s theory of knowledge creation (Nonaka, 2004) and Engeström’s theory of expansive learning (Engeström, 1987, 2000, 2004).¹ Second, some of the implications for education of organizational learning are drawn. Although there is, as stated, little evidence of the insights of organizational learning theory being applied in education, there are signs in England that organizational epistemology may have consequences for what has been termed ‘workforce remodelling’ in education, an issue that is of central concern to the modernizing agenda of the former Teacher Training Agency, now the Training Development Agency for Schools (TDA). It is of further relevance to the emerging policy preference for inter-professional and inter-agency collaborations in the delivery of public policy. Third, in contrast to much of the work on organizational learning—which tends to draw on psychology—I introduce some sociological perspectives that may be brought to bear upon organizational epistemology in education, referring to strands in interpretive sociology and critical theory.

Knowledge and organizations

Throughout the latter half of the twentieth century, the study of formal organizations such as schools has had the intention of eliminating uncertainty and of ensuring predictable and effective action. But rational *management* theory of itself will not suffice (Biggart, 1989, p. 169), and there have been calls for a complementary *leadership*.

The management of innovation (Burns & Stalker, 1961) is now at issue for most organizations, both public and private. I turn now to the first stage of the argument: an introduction to some of the strands within the field of organizational epistemology, and, in particular, Nonaka's theory of 'knowledge creation' and Engeström's theory of 'expansive learning'.

Organizational epistemology: knowledge creation

In 1997, Ikujiro Nonaka was appointed to the first 'knowledge professorship' at the Haas School of Business at the University of California at Berkeley. Having studied organization theory, he appears to have been influenced by contingency theorists and their insights into the effects on organizational structures of the external environment. Rejecting behaviourism, Nonaka argues that the process of knowledge creation turns on 'making personal knowledge available to others' (Nonaka, 2004, p. 32). With Takeuchi, he states: 'Knowledge is not *either* explicit or tacit. Knowledge is *both* explicit and tacit. Knowledge is inherently paradoxical since it is made up of what appears to be two opposites' (Takeuchi & Nonaka, 2004, p. 4; emphasis in original). New knowledge, they argue, is created as a result of an engagement—a 'conversion process' or knowledge creation 'spiral'—between tacit knowledge and explicit knowledge.

The process is as follows. Knowledge conversion consists of four modes. The first, from tacit to tacit, is known as *socialization*: for example, a traditional apprenticeship with an emphasis on hands-on experience. The second mode, from tacit to explicit, is termed *externalization*: for example, a quality-control circle, which enables workers to pool their tacit knowledge, and thereafter to render it as explicit and formal, to be more easily made known to others. The third, from explicit to explicit, is known as *combination*: for example, a finance officer who collates explicit information, combining it so as to produce a synthesis in the form of a formal financial report. The fourth mode, from explicit knowledge to tacit knowledge, is known as *internalization*: for example, a staff-training programme may provide explicit documentary knowledge produced by senior managers that, through simulations or workshops, may thereafter become internalized as tacit knowledge among employees (Nonaka *et al.*, 2000; Takeuchi & Nonaka, 2004, p. 15). After internalization, the upward knowledge creation spiral begins anew. This process admits the acronym SECI (socialization; externalization; combination and internalization), which is 'the continuous self-transcending process of knowledge creation' (Nonaka *et al.*, 2001, p. 13). There is, therefore, an *epistemological* dimension (i.e. from tacit to explicit and thence to tacit) and an *ontological* dimension (i.e. from the individual, to the group, to the organization and—less so—to the inter-organizational field).

The process has implications for management. For the most part, senior managers hold explicit knowledge, and it is front-line workers who hold tacit knowledge. But, for Nonaka, it is 'middle-up-down' managers who are said to synthesize this tacit knowledge of the front-line employee and the more formalized knowledge of senior managers (Takeuchi & Nonaka, 2004, p. 13). "Distributed leadership" as seen in middle-up-down management is the key' (Nonaka *et al.*, 2000, p. 21). It is deemed

to be crucial to the process of knowledge creation. In short, middle managers implement the 'knowledge vision' held by 'top management'. But in order for this knowledge-management to occur, however, some decidedly non-rational conditions have to be present. Among them are said to be creative chaos, autonomy, variety, love, care, trust and commitment. 'Creative chaos', for example, is not disorder that is organic to the organization; rather, it is *introduced* by senior management so as 'to evoke a sense of crisis amongst its members by proposing challenging goals or ambiguous visions' (Nonaka *et al.*, 2001, pp. 27–28). Nonaka's work has been extremely influential but not without its critics. Engeström, for example, has argued that Nonaka's knowledge-creation process is overly managed and that the worker is excessively socialized (Engeström, 2000, pp. 967–968). Engeström's own theory of expansive learning is now introduced.

Organizational epistemology: expansive learning

In England, as elsewhere, government regards partnerships and collaborations as instrumental for the 'delivery' of the public services. By definition, inter-agency and inter-professional working require the 're-modelling of the workforce'. But this 'modernizers' quest itself requires a theory that will inform its implementation. Engeström re-states the quest as a question: 'What can keep radically distributed work and expertise together, coordinated and capable to act in concert when needed?' His response: 'I argue that its necessary glue is focus on the *objects* [not on the actors] of professional work and discourse' (Engeström, 2004, p. 6; brackets added). This introduces his theory of expansive learning' (also referred to as 'radical exploration'). Unlike Nonaka, contradiction is Engeström's point of departure:

In contrast, a crucial triggering action in the expansive learning process discussed in here, as in other analogous processes analyzed, is the *conflictual* questioning of the existing standard practice. (Engeström, 2000, pp. 967–968; emphasis in original)

Engeström's expansive learning—drawing particularly upon the Soviet psychologies of Vygotsky and Leont'ev—is based upon a seven-stage ideal-typical 'expansive cycle'. Unlike Nonaka's four-stage cycle (which begins with the definition and *sharing* of tacit knowledge), Engeström's first stage consists of the *questioning* of current practice within a collective activity system. Before discussing the subsequent six stages, I shall refer briefly to the meaning of 'activity system'.

There are a number of dimensions to an activity system. The 'subject' of the activity system comprises the individual or subgroup, which brings its gaze and intention to the 'object', or, crudely, that which the 'subject' is working on. The 'object' itself is not a goal, fixed and formal. It is '[...] a heterogeneous and internally contradictory, yet enduring, constantly reproduced purpose of a collective activity system that motivates and defines the horizons of possible goals and actions. [...] The object is projective and transitory, truly a moving horizon' (Engeström, 2004, p. 6). The object is that to which the activity is directed and which will be changed, with the aid of 'tools', thereby generating 'outcomes'. (The 'tools' may be physical or symbolic,

external or internal.) So, by way of illustration, and again put simply, the ‘subject’ could comprise a group of professionals who are providing services for children; and the ‘object’ in this case could be to learn how to accomplish inter-agency and inter-professional working. The ‘community’ consists of other ‘multiple individuals and/or subgroups who share the same general object’. Within this community there exists a ‘division of labour’, differentiated by task, power and status. The activity system also has ‘rules’, both formal and implicit, which support or constrain actions and interactions within the system (Engeström, 1987). Furthermore, two activity systems themselves may interact horizontally with each other, their respective ‘objects’ combining to form a third object, as represented diagrammatically in Figure 1 (Engeström, 2001, p. 135).

Let us recall that Engeström’s first stage consisted of the *questioning* of current practice within a collective activity system. Now, in the second stage, this problematic is analysed and its aetiology sought (*historical analysis* and *actual-empirical analysis*). Models that purport to solve the problem are *constructed* (the third stage), *examined* (the fourth stage), *implemented* (the fifth stage), *reflected upon* and evaluated (the sixth stage), and are finally *consolidated as new practice* (Engeström, 2000, p. 970; 2001, p. 2). There is no requirement that these stages follow each other sequentially. The transformation is never finished (Engeström, 2004, p. 5); and nor is there any guarantee that the later stages will be achieved. That is to say, actors may desist from confronting the contradictions and ruptures, and may adopt intractable defensive positions. Individual—not collective—solutions may be sought (Virkkunen & Kuutti, 2000, pp. 303–304).

The very adjective ‘expansive’ implies not just a cognitive dimension, but also an organizational dimension. It refers to a horizontal spatiality, with a typically postmodern emphasis on the *inter*, boundary-breaching aspect of categories: ‘This horizontal aspect of learning in co-configuration puts a heavy emphasis on *actions of bridging, boundary crossing, “knotworking”, negotiation, exchange and trading*’ (Engeström, 2004, p. 5; emphasis in original). Two concepts here are of interest: co-configuration and knotworking. ‘Co-configuration’ draws upon marketing theory, and in particular

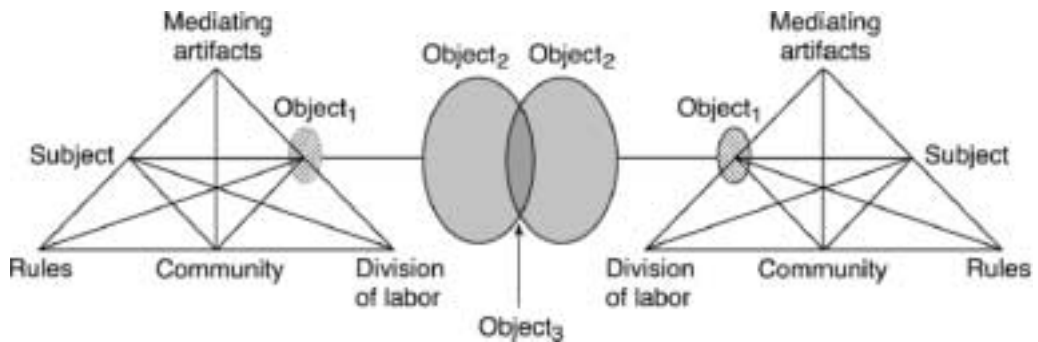


Figure 1. Two interacting activity systems as the minimal model for the third generation of activity theory (Engeström, 2001, p. 136)

upon Victor and Boynton's (1998) *Invented Here: maximizing your organization's internal growth and profitability*. Central to their thesis is the process of co-configuration in an age of co-customization. This is said to supersede the previous phase of 'mass customization' that emphasized the customer-provider relationship, the needs of the customer being recognized in the product or service to be provided. Co-customization takes this further because it purports both to deepen and—crucially—to continue the relationship between customer and provider:

Co-configuration work occurs at the interface of the firm, the customer, and the products or services. It requires constant interaction among the firm, the customer and the product. The result is that the product continuously adjusts to what the customer wants. Co-configuration creates *customer-intelligent* value in products or services where the line between product and customer knowledge becomes blurred and interwoven. (Victor & Boynton, 1998, p. 14; emphasis in original)

It is the pursuit of 'products that continuously remake themselves as your needs change' (Victor & Boynton, 1998, p. 14). This reciprocal partnership never finishes. But it raises a practical question for co-configuration. Technical innovation, product and customer all require to be monitored continually; and not separately, but relationally (Victor & Boynton, 1998, p. 205). This begs the further question about who 'captures' this information and who has access to it. Co-configuration also requires a particular form of social relations at work: its form relies not so much upon vertically structured hierarchies, but on a more horizontally arranged association known as 'knotworking':

The notion of knot refers to rapidly pulsating, distributed and partially improvised orchestration of collaborative performances between otherwise loosely connected actors and activity systems. [...] The centre does not hold. The locus of initiative changes from moment to moment within a knotworking sequence. (Engeström, 2000, p. 972)

By definition, therefore, knotworking is not easily configured bureaucratically. It is not predictable, neither as an organizational arrangement nor as a temporal one. This constant re-structuring may prove to be a de-stabilizing provocation to those long used to the safe certainties of working in a stable bureaucracy (Engeström, 2000, p. 973).

Organizational epistemology and education

Despite Hargreaves' (1999) endorsement of Nonaka's knowledge creation process, organizational learning is only beginning to influence education. The impetus for this is partly the quest to 're-culture' schools. That is to say, the term 'consumer' has been insinuated into educational discourse since the school-choice legislation in the early 1980s. But notwithstanding its affinity to the notion of a (free) market, there has been a seemingly paradoxical high level of regulation by the government in England. The basis for the paradox is that, in order for a market to operate, would-be consumers must be informed by objective and comparable information about the various 'products' (here, schools) on offer. This has spawned a range of regulatory agencies (such as OfSTED) and procedures (such as league tables) to be introduced. The Labour

Government since 1997 has continued with the marketization and regulation of education. But whereas the previous Conservative Government had been pre-occupied mainly with the re-structuring of the system along the lines of a quasi-market, the Labour Government has also sought to 're-culture' education, having realized that a mere re-structuring and a *dirigiste* approach were not sufficient to bring about the desired changes. The emphasis on 'leadership', for example, is seen as a central part of this re-culturing.

The development of re-culturing is set to occur at two levels: first, within schools; and, second, horizontally among schools and other agencies. At both levels, organizational epistemology has relevance. Take the first level: within schools. An emerging aspect of re-culturing in England is 'workforce re-modelling'. In 2003, the Department for Education and Skills (DfES) established the National Remodelling Team to take forward this policy. In addition, the new TDA has a broader remit than was assigned to its predecessor, the Teacher Training Agency. On 17 October 2005, Ruth Kelly, Secretary of State for Education and Skills, at the TDA's 'Stakeholder Day 2005' conference, stated that she saw the TDA 'as my modernisation agency' (Kelly, 2005). At the same 'stakeholder' conference, Ralph Tabberer, the chief executive of the TDA, declared that recently schools had been 'the site of one of the most dynamic workforce reform processes in our economy'. He predicted that this process was set to continue: 'Everything is in flux' (Tabberer, 2005, p. 4). A further initiative—again associated closely with the TDA's workforce reform agenda—is the establishment and endorsement of 'professional learning communities', a construct that has greater prominence in the United States. In English schools, the percentage of support staff and teaching assistants has been rising in relation to the number of teachers (Tabberer, 2005, p. 3). These 'workforce' categories have very different cultures and professional training. They are segments in search of a shared structure and culture—or so the government would wish. What is clear is that the government wishes somehow to combine these identities, encouraging them to learn from each other in a collective endeavour so as to accomplish its emerging agenda of 'personalization' (DfES, 2005a, see especially chapter 4). So far, it has been 'distributed leadership' that has been regarded as a solution. Complementary to it, organizational epistemology may offer new theoretical insights on how school-based re-culturing can be achieved.

So much for the quest to enable the classification-breaching 're-modelling' *within* schools. There is a second dimension to this process that is to be applied among schools and other agencies. As stated, the government's 'delivery' of the public services has, of late, set great store by the need for inter-agency and inter-professional working. Hitherto, rigidly separated and defined providers were deemed to be unable to cater for those whose needs did not fit these given institutional parameters. They slipped through the net, were 'excluded', some of their needs unattended to. Nowhere is this seen more clearly as in its policy for the care, health and education of children in their early years, and for at-risk groups. Tabberer's 'children's agenda' appears to rest on both the Children Act of 2004 and the subsequent cross-department paper *Choice for Parents, the Best Start for Children: A Ten Year Strategy* (Her Majesty's Treasury, 2004). The latter has a section, for example, on the amalgamation of 'education' (teachers)

and ‘care’ (childcare workers/social workers) (Her Majesty’s Treasury, 2004, para. 6.2), and there is discussion of the need for some kind of early years professional (such as a ‘pedagogue’). Moreover, a MORI (2004) survey, *The Childcare and Early Years Workforce Survey 2002/03*, gives extensive findings on some of the consequences for the professional education and working conditions of this workforce.

Other boundaries—among community, family and school; and between public and private agencies—are being rendered more permeable than hitherto, not only because to do so enhances social capital, but also because it is deemed to be more efficient and effective. It is within this *inter* nexus that Extended Schools are located (DfES, 2005b). Among their ‘offers’ of provision are ‘wraparound’ childcare throughout the year, various clubs and activities, support for parents, and prompt referrals, when needed, to support services. Extended schools themselves have both economic and democratic rationales. The economic rationale turns on two considerations: the first is that it has the potential to enable parents to work full time within flexi-time work regimes; second, informed by human capital theory, it assumes that extended schools will help to drive up educational standards (and, by implication, economic productivity). The democratic rationale is that it may enable greater social cohesion and may improve the work–life balance. And if there are economic productivity improvements in the longer term, then this could generate greater tax revenues with which to fund social programmes within the welfare state, and thereby alleviate the very high rates of child poverty and regenerate communities. The funding for extended schools currently is dispersed through local education authorities, thereby enhancing local democratic accountability. In sum, extended schools seek to be an elegant example of how to effect transformations (be they spatial, social and cultural) at the level of a ‘consumer’ (be it community, family and child) and at the level of ‘providers’ (e.g. education, social and health professionals). They comprise a paradigm case of broad policy-domain coverage. That said, very few insights have been offered by government on how multi-agency working will work. It is a policy largely bereft of a theory of implementation. Nevertheless, research is already being undertaken: for example, the National Evaluation of the Children’s Fund in England (Edwards, 2004) and the ESRC-funded *Learning in and for Interagency Working* project (Daniels *et al.*, 2004). Both have developed Engeström’s theory of expansive learning. In addition, a body of literature informed by organizational learning has emerged on the school-to-work transition (Guile & Young, 2003; Tuomi-Grohn & Engeström, 2003), and the *Educational Review* devoted a special issue in 2004 to cultural–historical activity theory. For the most part, therefore, organizational learning has tended to draw upon the discipline of psychology. But there have been calls for a complementary sociological analysis of organizational epistemology (Calori *et al.*, 1998, p. 162; Daniels, 2004, p. 124), a matter attended to below.

Organizational epistemologies and education: sociological perspectives

Social theory has both informed and has been critical of organizational epistemology. In relation to recent education policy in England, I refer first to the *application* of

interpretive sociology to organizational learning theories; and, second, I consider some macro-sociological *critiques* of organizational learning, drawing on critical theory.

Within Nonaka's knowledge-creation approach, there is a clear association with Schutzian phenomenology. Nonaka gives much emphasis to the tacit, to the taken-for-granted, and to the process of what Schutz (1972) called 'inter-subjectivity': that is, the motivational understanding of the actions of others. There is, too, an intellectual accord with Berger and Luckmann's (1967) 'objectification of the subjective', which is the process whereby subjective realities become shared, habitualized and reified over time. A further strand in the interpretive paradigm has a lesser relevance to Nonaka's theory; namely, ethnomethodology (Garfinkel, 1984). To elaborate: ethnomethodology is not so much interested in the definition of reality itself, but in how provisional and 'slippery' it is. By *intentionally* disrupting the individual's definition of reality, ethnomethodologists are concerned, first, to remind us how provisional that reality is and, second, to observe how individuals re-build their definition of the situation in the face of absurdity and meaninglessness. This is why it was referred to as the 'sociology of the absurd' (Lyman & Scott, 1970). By advocating that senior managers intentionally *create* 'chaos' as the starting-point for new learning, Nonaka's approach can be said to have an intellectual affinity with ethnomethodology. But the creation of 'chaos' in Nonaka's approach is not central to his knowledge-creation cycle, and is of far less importance than the 'surfacing' of contradictions in Engeström's expansive learning. In Nonaka's approach, what shall count as chaos is defined by 'top' management; for Engeström, 'contradictions'—which are not the same as problems, but are 'historically accumulating structural tensions within and between activity systems' (Engeström, 2001, p. 137)—emerge from within and between activity systems. In this latter endeavour, Engeström refers to the 'phenomenology and delineation of the activity system':

The first step of expansive developmental research consists of (a) gaining a preliminary *phenomenological insight* into the nature of its discourse and problems as experienced by those involved in the activity and (b) of *delineating* the activity system under investigation. [...] As to (a), the researcher's task is to get a grasp of the need state and primary contradiction beneath the surface of the problems, doubts and uncertainties experienced among the participants of the activity. This may be accomplished through comprehensive reading of the internal and public discussion concerning the activity, through participant on-site observations, discussions with people involved in the activity or having expertise about it, and the like. (Engeström, 1987, pp. 269–272)

The phenomenological insights constructed by the researchers may thereafter be presented to those whose first-order meanings helped to generate them, but this very second-order selection of surfaced 'insights' is for the researchers to discern (not, as with Nonaka, 'top' management). Even so, there may be sensitivities: should the emergent 'contradictions' that have surfaced from among operational staff be shared with those that have emerged from among strategic staff? It may be difficult for researchers to ignore the micro-political consequences of their 'surfaced' contradictions. Expansive learning occurs both within and between bureaucracies, and the

matters of authority and power cannot be intended away, an issue addressed by some critical theorists below.

Critical theory argues that organizational epistemology deploys a discourse that appropriates the language of humanism in order to render capitalism acceptable. This is not just a recent practice. For example, Boltanski and Chiapello (1999) argue that the 1960s' 'artistic critique' made of French business was to be appropriated on behalf of a business agenda. That is to say, the critique consisted of demands for workers to be given more managerial control, and for their autonomy and creativity to be recognized. These demands were quickly incorporated into the new 'spirit of capitalism': autonomous, empowered, self-managing workers who are managed according to the principles of post-Fordism. Now, along similar lines, in their provocatively titled article 'Against learning', Contu *et al.* (2003, pp. 933–934) argue that, because of the near-ubiquity of the term 'learning', it has acquired the status of common-sense, as beyond question and debate. There is a concern, too, that team-based flat hierarchies may harbour a revival of nepotism and suspicion, notwithstanding their declared commitments to an egalitarian position (Casey, 1995, p. 154); and nor is the learning organization likely to be one wherein management relinquishes its strategic control over the formal goals – it will be the tactics for their realization that will be put out for 'learning' and co-production. The hegemony of the management will thereby be enhanced (Coopey, 1996, p. 364). Advocates of expansive learning would say, however, that contradiction (not compliance) is *central* to their method; and even proponents of Nonaka's knowledge creation would refer the sceptic to its call for managed 'chaos'. Particularly for Engeström, expansive learning does not intend away contradiction; rather, it 'surfaces' contradiction in order to generate the search for improved working practices within and between activity systems. But these contradictions are largely about means, not ends; about operations, not strategy; about activity only. Indeed, the term 'contradiction' here warrants a sociological critique in itself (Warmington, 2005). The same criticism may be applied to the recent reliance which the National College for School Leadership in England has placed on distributed leadership. That is to say, who triggers the 'distribution', and on which issues (strategic or operational) will it 'lead'? (Hatcher, 2005).

In the *Fiscal Crisis of the State*, O'Connor (2002) argued that modern capitalist societies are faced with an enduring question: how, in a democracy, can the conditions for capital *accumulation* be *legitimated*? In an emergent knowledge economy, 'learning to labour' (Willis, 1977) partly means learning to learn; it means being a 'self-programmable worker', not a 'generic' worker. If the nomenclature of some recent education policy is considered, then a new spatiality is emerging: *distributed* leadership and learning, *extended* schools, *inter*-agency working (including public and private), and *re*-modelling. At one level, these resonate with the *cultural* penchant for boundary permeability, ephemerality and looser classifications. But they are symbolic also of new work-patterns, and therefore they have a declared *economic* function. Accumulation is thereby served. But, at the same time, this new spatiality—and in particular those aspects of it which appeal to *co*, to *inter* and to *expansive*—serves also a legitimacy purpose. Just as *scientific* management legitimated

Taylorism, so now the appeals to *learning* serve as a justificatory rhetoric for the era beyond the 'new public management'. New 'solution spaces' are being sought. But all this takes place within pre-configured hierarchies whose disturbance will not easily be achieved.

Organizational learning may loosen bureaucracy. It does not remove it. In this respect it is no different from the human-relations inspired 'soft bureaucracy' of the Hawthorne Studies of the 1920s and 1930s (Gillespie, 1991). In neither instance is strategic power extended to the lower participants. Furthermore, in order for 'contradictions' to surface, trust is needed; if it is absent then contradictions will be silenced, not surfaced. In a highly performative public sector, trust is in short supply; stress is not (Health & Safety Executive, 2005, p. 8). More generally in society, there is a tendency towards de-socialization (Touraine, 2000, p. 38), towards a withdrawal of trust in others. It is perhaps not surprising that knowledge creation is associated more with Japan, and expansive learning particularly with Finland. In Japan, group harmony and lower levels of individualism may have been the reasons why Nonaka's approach set less emphasis on the provocative power of contradiction. In Japanese organizations there is greater store set by tacit knowledge and harmony. There is a high level of trust among organizations, and there is less conflict between them (Ahmadjian, 2004). But to engage in the very process of expansive learning implies also an openness and trust. In Finland, where expansive learning is most developed, levels of trust are relative high. In Britain, for example, only 29.8% agreed with the statement 'most people can be trusted'; in Finland, the corresponding figure is 58.0% (Van Schaik, 2002). In England, to repeat, the government *inter* rhetoric is framed within a policy discourse of performativity and competition, a mixed message that itself can generate confusion. And the government remains the 'system designer':

It [the DfES] will increasingly be the 'system designer', setting in place the framework of legislation, incentives, information and funding to make change happen. It will use the guiding principles of this strategy—personalisation and choice, diversity, freedom and autonomy and stronger partnerships—to underpin its work. [...] There will be a continuing drive to ensure that this work is done with maximum efficiency and effectiveness, using ICT to improve services to the public and benchmarking services against public and private sector comparators. (DfES, 2004, p. 84; parentheses added)

In sum, 'activity systems' are themselves nested isomorphically within that system designed by government. If expansive learning threatens this system, it is unlikely to be permitted (Young, 2001, p. 31). It is to be suspected that much of the 'co-production' will be horizontal, not vertical, thereby leaving intact the power of formal decision-makers on strategy. And if public services are to be 'co-produced' in solution spaces with 'users', then users themselves will surely be held partly culpable by government for any shortcomings in service-provision.

Conclusion

The purpose here has been to introduce some sociological aspects of the field of organizational learning, and to indicate its emerging importance in contemporary

education policy in England, particularly where it intersects with other public services. 'Gaps' in the system are to be closed. A seamless experience for users is sought. Co-produced solutions are to be achieved. Already, in education, workforce re-modelling and inter-agency working are generating strains in structures, processes and professional identities. Recall Tabberer's assertion that 'everything is in flux'. The means whereby these new solution-spaces are achieved has not been clarified by government. The policy requires a theory of implementation. It is in this respect that organizational learning seems set to serve as a means of coping with, or of enabling, these transformations. In short, organizational epistemology comprises what Bernstein (developed by Beck & Young, 2005, p. 191) refers to as a 'continuous pedagogic reformation'. But it is not simply a question of co-configuring spaces into new locations for inter-agency working; it requires also a coalescence of professional knowledge bases and cultures. Organizational epistemology has appropriated aspects of interpretive social theory, but it remains broadly functionalist, devoid of a theory of power, even though there are within its repertoire terms like 'contradiction' that appear to open up emancipatory and empowering spaces. The collective opportunities suggested by 'co-production' portend even more progressive possibilities. Whether these possibilities come to pass remains an empirical question. But it is to be doubted: pedagogically, organizational learning is potentially radical, but not if the 'curriculum' that is 'transmitted' remains set and monitored by the 'system designer'.

Note

1. The 'knowledge creation' theorists considered here are not intended to be exhaustive, only illustrative of an emerging paradigm. I omit, for example, Bereiter (2002).

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