Towards an emergent view of learning work

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The purpose of this paper is to challenge models of workplace learning that seek to isolate or manipulate a limited set of features to increase the probability of learning. Such models typically attribute learning (or its absence) to individual engagement, manager expectations or organizational affordances and are therefore at least implicitly causative. In contrast, we discuss the contributions of complexity theory principles such as emergence and novelty that suggest learning work is more a creative and opportunistic process that emerges from contextualised interactional understandings among actors. Using qualitative case study methods, we discuss the experiences of workers in two organizations asked to ‘act up’ in their managers’ role to ensure work continuity. We believe the differences in how workers take up these opportunities result from a complex combination of situational factors that generate invitational patterns signalled from and by various understandings and interactions among actors doing collective work. Rather than a deficit view of learning that needs fixing, an emergent model of learning work suggests that learning develops as a collective generative endeavour from changing patterns of interactional understandings with others. This re-positioning recognises that although invitational qualities cannot be deterministically predicted, paying attention to the patterns of cues and signals created from actors interacting together can condition ways of understandings to expand what is possible when work practices also become learning practices.

Introduction

The growing interest in researching learning in and at work presupposes the existence of a relationship between learning and work that is useful for unpacking the concepts of ‘learning’ and ‘work’ and for understanding how they interrelate. Fenwick and Rubenson (2005: 1) undertook a review of nearly three hundred articles written by researchers specifically focusing on ‘learning (processes, dimensions, relations) in and through work’ in ten scholarly journals during 1999-2004. What they found was a wide variation in what researchers understood as learning but a growing occurrence of empirical discussions on work practices, practice-based theories and notions of communities of practice. In a majority of the articles reviewed, they found that learning is assumed to be an individual phenomenon although it has collective impact, since the performance and delivery of work typically requires, and is generated from, the collective efforts of several individuals working together. One example of this is that the application of individual knowledge to work activity can add to organizational resources resulting in improved business capabilities (Fenwick and Rubenson 2005: 4). Another is that learning can be conceptualised as ‘information flow’ and ‘diffusion’ among multiple individuals and as ways of ‘social participation’ and constructed joint action within teams, groups, communities of practice and the organization (Fenwick and Rubenson 2005: 4-6).

In the area of work and learning, Billett’s earlier studies (2001a, b, c) on co-participation have been particularly influential in suggesting that the quality of learning outcomes is based on a reciprocal relationship between how organizations structure affordances to legitimise or
undermine learning opportunities and how individuals engage in those learning opportunities. Billett’s recent work (2006, 2008) has shifted the nature of this relationship from reciprocity to relational interdependence while also refining individual engagement in ontogenetic terms. However, his focus continues to examine the tension between entities or dualistic concepts set out often in opposition, for example, workplaces and individuals, organizational affordances and individual engagement, the social world and individuals.

In this paper, we challenge views of learning such as Billett’s and others, which can be taken to imply that features of the work environment can be isolated and manipulated to increase the probability of learning. In contrast, we introduce the concepts of emergence and novelty from complexity theory, suggesting that new properties or behaviours emerge from individuals working together in circumstances that cannot be predicted in deterministic and causal ways. Further we suggest, following Mead (1959 [1932]), that the social world of work performance and work behaviour shapes invitational qualities that provide cues and ‘conditioning relationships’ that individuals working collectively use to make sense, attribute significance and decide how to proceed in the practical affairs of organized work.

Understanding learning as a constructed, emergent and invitational phenomenon suggests a character to learning that differs from commonly-understood meanings that are dominantly cognitive, acquisition-oriented, normative, explicitly or implicitly causative (Kim 1993, Sfard 1998, Steiner 1998). Rather, learning is discovered and generated together with others from a complex web of contextual, interactional and expectational factors. While learning at work involves individuals and their work environment, opportunities for learning are created less from the tension between individual engagement and organizational affordances (Billett 2001a), or the dual reciprocal relationship between individuals and the work environment (Billett cited by Bryson et al. 2006: 293) than from contingently-formed patterns of understandings and interactions when actors enact the practical and situated work activities with others, often using material resources in their environment.

We illustrate this view of learning work by comparing and contrasting work practices in a local government council with a utility organization, two case studies we recently completed. Through researcher observations and worker self-reported reflections, we discuss exemplars of workers learning (or not) from the experience of ‘acting up’ in another person’s job when for example, their manager is absent or goes on leave. Our discussion of findings identify how workers navigate the complexities of their work environment through various signals and cues they receive from the ways they act, talk and draw inferences from their everyday work. Some patterns of interactions generate more invitational qualities and spaces for learning than others; they condition relationships towards directions that influence the emergence of learning for some workers but not for others. This is because workers constantly (re-)form their current bases for action through enmeshing past experiences with the specifics of contextual priorities that must necessarily be accommodated. We conclude our paper with some observations about the relevance of complexity principles for re-viewing work environments as creative spaces for exploring possibilities through the public forums of work and work practices.
From causative to emergent models of learning work

The study of complexity in nature, for example the collective animal behaviour of ant colonies and bird-flocking (Maturana and Varela 1987, Anderson and Franks 2001, Sumpter 2005), has generated researcher interest in developing analogies for human learning in the social sciences (Stacey 2001, Anderson and McMillan 2003, Stacey and Griffin 2005, 2008). A complexity principle from the biological sciences states that macro-level or global patterns arise from the behaviour of local interacting agents but this global behaviour cannot be traced back to the behaviour of any individual agent; rather this behaviour emerges (the *emergence* principle) and is novel (the *novelty* principle) with respect to the individual agents (De Wolf and Holvoet 2004). The organizational analogy, if it holds, is that collective behaviour as shaped by shared understandings and made visible by the actions and talk of groups, cannot be explained with reference to the combinations of individual understandings, motivations and actions.

The emergence principle therefore disputes the claim made by Kim (1993: 37, 43, our italics) in his paper that it is possible to ‘build a theory about the process through which *individual learning advances organizational learning* [using the concept of a group as] a collective individual … [or] extended individuals’. Kim’s paper joins many others that imbue learning in organizations with causal drivers that can be attributed to motivation (Deci *et al.* 1991, Pool 2000), knowledge (Argyris 1993, Lesser 2000) or transfer (Dettmerman and Sternberg 1993, Eraut 2004) and that helped to fuel the momentum of ‘the learning organization’ (Senge 1990, Chawla and Renesch 1995, Lipschitz *et al.* 1996).

Analogously, Billett (2001*a*, b, c) introduced the notion of *co-participation*, suggesting that the quality of learning is shaped centrally by a reciprocal relationship between how organizations afford the opportunities for learning and how individuals engage in those opportunities (Billett 2001*a*: 209). According to Billett, ‘the degree by which workplaces provide rich learning outcomes through everyday activities and intentional interventions will be determined, at least in part, by its readiness to afford opportunities and support for learning’ (Billett 2001*a*: 210). Billett goes onto assert that because workplaces are contested environments, these learning affordances are not provided evenly to all workers; as well, workers elect to engage in these opportunities differently, resulting in the variable take-up of opportunities and qualities of learning experiences (Billett 2001*a*: 210). An implication of Billett’s co-participation concept is that workplaces can be altered to become more invitational and encouraging and that activities such as the development of workplace curricula or learning guides can result in improved workplace learning (Billett 2001*a*: 213).

Billett supports his model of co-participation by discussing findings from prior empirical studies (Billett *et al.* 1998, Billett 2000). Others have used similar tensions between access and opportunity, personal disposition and situational factors, facilitating and constraining factors, or restrictive and expansive learning environments to empirically test the nature of relations between various factors that signal learning at work (Ellström 2001, Frese and Fay 2001, Fuller and Unwin 2004, Bryson *et al.* 2006). Rather than co-participation, Billett’s most recent work now theorises relations of ‘interdependence between the immediate social experience and individuals’ appropriation of that experience … constitut[ing] a dualistic and
relational base for individuals’ learning and remaking of their work activities … [that can be] relational in unequal, inconsistent and disjointed ways’ (Billett 2008: 238-239). Such views start to recognise the complexity of the relationship between work and learning, but we believe they are still reductionist in simplifying the phenomenon of learning work to tensions between polarities. They are premised on the notion that a limited set of factors can be manipulated to improve the probability of learning. These approaches contribute to, at least, implicitly causative models of learning.

A more non-deterministic notion of the relationship between learning and work recognises that this phenomenon cannot be attributed to its constituent elements (the group/individual dichotomy as previously mentioned) nor to any one or set of elements that can be universally differentiated, for example, organizational cultural values, past events such as mergers or crises, prior experience of particular types of work or whether the work environment is encouraging of learning. Applying the emergence principle and the novelty principle together to learning work suggests that a social poetic (from the Greek poiesis, to make new or create) phenomenon is created (Shotter 2008), one that creates what Bhabha (Bhabha and Rutherford 1990: 211) calls a ‘hybrid third space … [where we are not] able to trace two original moments from which the third emerges’.

The notion that something new is created that is more than the sum of its parts is further enhanced by two other related concepts from complexity theory: the self-organization principle (De Wolf and Holvoet 2004) and the snowball effect (Arthur as cited by Mason 2008: 41). Self-organization suggests that behaviour continues to be perpetuated by local interacting agents rather than any concept of a central or executive control mechanism. In workplaces embracing a post-bureaucratic paradigm, self-organization resonates with analogous concepts of employee empowerment and ‘bottom-up’ accountability (Wilkinson 1998, Wall et al. 2002). It indicates a shift in the role of managers from controllers or enablers of workplace affordances to practical authors and interaction partners in the dialogical activities of everyday work (Cunliffe 2003, Koopmans et al. 2006). Further, the snowball effect recognises that momentum can come from a series of small, possibly random, events but that in some combinations of contextual arrangements and interactive effects, an autocatalytic result occurs that disrupts the stability of the phenomenon (autopoiesis as coined by Maturana and Varela 1980) or what is called a tipping point in business (Gladwell 2000).

These complexity concepts that govern an ecological view of nature are complemented by Mead’s philosophical work on the nature of time (1959 [1932]). Mead challenges common understandings that time can be segregated into discrete intervals of past, present and future, further disputing the predictive power that past experiences have for future behaviour (Schwandt and Marquardt 1999; Race 2000, Edmondson 2004). For Mead, the present always remains the locus of reality with the past only representing the past in its relation to the present, i.e. actors make sense of something that has occurred retrospectively but only from their position in the present. As Murphy interprets Mead:
The distinctive character of the past in its relation to the present is manifestly that of irrevocability. As conditioning the present, as making its occurrence possible, the past must have been of determinate character. It expresses the settled condition to which the present must conform and without which it could not have been what it is … [T]he past is that out of which the present has arisen and irreversibility … has its critical value in terms of such conditioning.

The doctrine of emergence asks us to believe that the present is always in some sense novel, abrupt, something which is not completely determined by the past out of which it arose. A present if it really is new at all, will have in it an element of temporal and causal discontinuity (Murphy 1959: xvii).

So as actors, while we can never return to our past, we continually reconstruct our recall of these past experiences from our current positions. As Josselson (1996: 35) observes transposing Kierkegaard, ‘we live life forwards but understand it backwards’. Our present is partially conditioned by our past but we require what Mead (1959 [1932]: 37-38) calls ‘contact experience’ created from interactional understandings of living (and working) in the present with others. These experiences include cues like gesture and response and Mead’s theory of communicative action (Blumer 1969, Blumer and Morrione 2004) to continue to meaningfully interpret what remains significant and relevant in our contextual environments.

Human actors are natural contextualising agents – we use talk, actions and judgements consciously and unconsciously to signal our rational, conative and affective intentions. But we are also subjective interpreters – what one person interprets from the work context as relevant and significant may differ considerably from another person who is situated in the same work context. Therefore interactive understandings need to be negotiated and reconciled because work is a public rather than private affair that is located and played out in the public sphere (Kemmis 2004).

Conceptualising learning work as a non-deterministic and interactional phenomenon from which novel shared understandings emerge, structures the nature of learning as a generative endeavour rather than being conceptualised as a deficit model for which root cause analysis is regarded as beneficial and instrumental. We interrogate this alternative view of learning by next discussing our research work with two organizations.

How and when does learning emerge? Learning work in two organizations
We are part of a larger research team that is researching the interrelationship between work and learning and investigating in what ways learning that is integrated with work can emerge from work. We are using multiple qualitative data methods in the tradition of case study methodology and narrative inquiry to understand how research participants experience the phenomenon of learning through work. We are unpacking the ways in which these work and learning practices are deployed through how participants act and talk with others and in how they use material resources to perpetuate their ongoing understandings of work and learning. Here, we discuss the experiences of participants working in two organizations:
1) a local government council responsible for community services in a suburban area of a major metropolitan city (we call this organization *Council*),

2) a utility responsible for provision of energy infrastructure and services for a region of the same city (we call this organization *Utility*).

*Interpreting the opportunity to ‘act up’*

Most organizations, including Council and Utility, depend upon work progressing forward even when responsible individuals take leave, resign or become unavailable. A commonly-used option is to ask a worker to temporarily assume his or her manager’s job, termed ‘acting up’. At both Council and Utility, participants told us about how they interpret their opportunities to act up (Table 1). For Kirsty, Peter and Sam, acting up is more a caretaking process of ‘keeping the seat warm’. It enables the business to continue the performance of required activities through the efforts of others who ideally should not disrupt current practice too much so that it requires ‘fixing’ upon the incumbent’s return, or when a new incumbent is selected to make ‘real’ changes in practice.

In contrast, other participant views illustrated in table 1 indicate that acting up can provide developmental benefits to learn various aspects of work: for example, understanding the responsibilities of the manager’s job (Greg) especially the consequences of managerial decisions (Tess), the opportunity to change managerial practice (Harry), the benefits of changed working relationships with other workers (Rob) or the organization glimpsing the potential of the worker to perform at a more advanced level (Stella). Here it would be difficult to generalise from only this cross-section of employee comments, that one organizational environment is necessarily more encouraging of learning than another. A co-participation argument might suggest that learning perceptions are shaped by the level of individual engagement in each of these contextual circumstances, that Kirsty, Peter and Sam are not particularly motivated to learn from the opportunity to act up because of their perceptions of too much work (if they had to perform their existing job in parallel), not really their responsibility or that this temporary work is not going to have any instrumental benefits (e.g. it is not a test case for whether Kirsty could be promoted into the job permanently).

However, more unpacking of local contextual and interactional factors suggests that participants often use cues and signals from others to determine how to proceed rather than holding universal or unvarying individual expectational factors. We expand on Sam and Stella’s experiences of acting up.
For the last ten weeks now I have been acting manager of the strategy and policy unit [and it’s] very different to the work that I do on a day-to-day basis, which I still have had to continue with. So that’s been quite interesting, it’s been a bit of a challenge … when I finish acting [the other policy analyst] will act for awhile. There is no chance that either of us will get the position, we are just keeping the seat warm until they get a suitable candidate … on one hand you do the best job you can, on the other hand, who gives a damn because it’s not going to make a difference – Kirsty.

I've acted up as a tradesman to a leading hand, from a leading hand to an office manager and … in two operations managers’ jobs … but I prefer not to, not because I can’t do it, but [because] I end up doing both and I do half of each rather than a complete one. So I try not to act up in this position. I went overseas for six weeks and I was off for two months last year and I had to train someone for three weeks to do my job.

That’s only a caretaker … role so you try and do as good a job as you can but it’s also you’ve got to hand that back in a week or two or three weeks time, so you tend not to get that involved in it because it’s not your baby – Sam.

I find while I’m doing their job, instead of just watching someone doing it or helping, when you’re actually sitting in the seat doing the job, you go … there’s got to be a better way – Harry.

I strongly encourage and support acting up but not on a ‘it’s your turn basis’ – some of [my people] felt it was better … to give everybody a turn to keep harmony – [but] the difficulty is that not everyone is comfortable with that environment. I mean they might do it because we’re a little family but it’s not differentiating because a team leader’s got a responsibility just like I have in the development processes – Greg.

I was acting for six months so it was a lot of hard work, it was petrifying [thinking] that you’ll do something wrong and the consequences of those decisions that you’ll make … it was scary, it was exciting, it was challenging … but when people start treating you differently because you’re in a different position that’s not necessarily a nice thing and it took me a while to get over that, that people started treating me differently just because I’m in a different position. I haven’t changed as a person – Tess.

I’ll be acting strategy and policy manager [for about six months because] the existing staff member resigned and, while they’re considering options for a restructure or the way they want this and other units in this group to be, they’ve nominated a few staff to act on a rotational basis, the idea being that it gives us experience in a role should we desire to apply as well as giving us just experience in general even if we don’t want to do it. It’s good to have the experience to be the boss.

…the first time I [acted in my boss’ role] for about five weeks … the guys actually had to get more familiar with me, rather than me just sitting off to one side and helping them out every now and then. I was actually involved in their work … so I think that changed things. Once I acted in [his] role a few times, that actually probably helped, get more involved in their work, and understand[ing] more about what they were doing and also, they then became used to coming to me for help for certain things [later on when I returned to my regular job] – Rob.

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**Sam's emergent learning from its effects on others**

Shortly after Sam’s comment about how acting up is normally only a caretaking role, he goes on to say,

I suppose you often whinge about some other role. If you're feeding into another role and you sometimes [hear] back from them about this or that and you think why, what’s the big deal? I guess until you do the job and you see the garbage they’ve got to go through … with reporting and everything, if you can do your job correctly, sometimes they seem to do their bit more easily or whatever.

I guess you become more careful in what you do whereas you might have just not been so. A classic example is when you package up a job package, when you’ve designed it or done everything you need to do, there’s certain things you need to do in the way of data, things you’ve got to put in the database and also work order numbers and stuff like that that you've got to raise. You’ve got to do all that correctly, with the right cost codes and all that. If you happen to get one of those – you’re only talking about one digit somewhere wrong if you’re a little bit careless – it can have this huge flow-on effect at the end where the chief accountant has this dummy spit and you get these emails going: why did you do this, look what you’ve done!

Here, despite the acting role ‘not being his baby’, Sam is signalling that he actually did learn and change his practice through having experienced what his manager’s role entails, and better understanding the consequences of actions he performs that have ‘flow-on’ effects on others in the organization. Sam may make global inferences about the principle of acting up as not disrupting the incumbent’s practice significantly, but he also realises that local circumstances and personal experiences shaped by the reactions of others modify this perspective as required.

**Stella’s emergent learning to be constructed with others**

Similarly, Stella talks about how she interprets what her supervisor wants from her acting manager role and how she may adjust her behaviour depending upon how the actions play out:

Well you really start looking at the value of the middle person, now after six months without our middle person, we know we need a manager, we do, we're very independent workers and we're able to get on with the job and do it but the day-to-day stuff of being a manager, you really need a person, you really do, and we've found that, but I don’t know that we would have said it beforehand, a good learning curve.

[My supervisor’s expectations of my acting manager role are] possibly just to hold the fort and take some of the pressure off him so that his door doesn’t have to be open to
seven different people … to deal with some issues and be his liaison certainly. I don’t know whether he's expecting the higher performance that he would of the manager, he certainly hasn’t stated.

Researcher: What do you expect of you?

Well I personally want to put into place some things that I'd like to see happen and I want to see the reaction when I do that.

Researcher: Can you give us an example?

This is a minor example but we currently do a monthly report [where] everyone has to report … every month … what they’ve done and everyone has their own little structure for it, different format of reports, different things in it. Some people will be minute-by-minute saying what they’ve done in a month and other people like myself will just put things in great big chunks and say this is what I spent most of my time doing, very much the 80/20 principle. But it's different for everyone and it's all in different little documents and that’s silly. What would be good is if there was one place where all six people just dumped their information and I see the value of that as at the end of the year when we're all doing performance reviews and we're all having to tell people outside of this section what we did this year, we've got this one document that says look at all the stuff we did. You wouldn’t have to pull twelve different documents from seven different people and look at them; it would all be progressively done every month. It's very, very small but there will be resistance to that.

Stella’s earlier comments in Table 1 could be interpreted as an instrumental motivation to take on the acting role to demonstrate her ability to perform and get paid at a higher grade. She also implicitly interprets her supervisor’s rationale to let her act up as an instrumental way to use her to enable his busy life to be more manageable. Yet Stella’s later comments reveal a risk-taking approach in wanting to put in place a new report consolidation process in her group that she believes will provide new benefits for other work practices but that is likely to face internal resistance.

Stella’s learning about the success or otherwise of this new approach if she proceeds, will be enmeshed in and emerge only from the actions and reactions of the group (as seen by compliance or non-compliance actions, supportive talk or resistant talk, or ideas and talk that could modify and even build upon Stella’s approach in unanticipated ways). Stella cannot predict the group’s reactions: her perceived sense of resistance may be an accurate read, or the group may surprise her by realising how her different perspective on a current practice can generate benefits for their other collective (or indeed individual) work practices. ‘As the organization happens’ (Schatzki 2006) and the action unfolds, the group with Stella in the acting manager role must reconcile and negotiate any differing perspectives using the specifics in their contextual circumstances as the basis to proceed.
Discussion: invitational patterns and spaces for learning

Our empirical discussion of two workplaces in the previous section has illustrated that invitational qualities for learning work cannot be simplistically summarised to a co-participation metaphor between workplace affordances and individual engagement, or other models that suggest learning work is deterministically causative. Our view is that there are more complex relations of a non-deterministic character that are operating here to structure the ways in which actors determine how to proceed, how to learn work and how to learn together through ways of working that have public and interactional consequences.

Workplaces and organizations look to survive, adapt and change. They evolve through, encompass and are shaped by the events and the individuals that comprise them but are not fully explainable by them. Concepts of time as espoused by Mead (1959 [1932]) move views of organizational change away from episodic anomalous events towards making sense of everyday ‘organizational becoming’ (Tsoukas and Chia 2002: 570). This unfolding nature of work is a dynamic, emergent and potentially transformative phenomenon. It is transformative in the sense that the ‘whole [is] much more than a sum of its parts’; that, as in the complexity sciences, when systems get to a sufficient ‘critical mass of complexity’, they go through a ‘phase transition’ that perpetuates its momentum in a certain direction but that this transition is ‘contingent on specific contextual factors’ (Mason 2008: 37).

We believe these complexity notions have conceptual power for better understanding the way learning works as an unfolding, interactional and contextual phenomenon. In educational workplaces, Davis and Sumara (2006: 137-141) argue that conditions of emergence can be shaped by educators promoting aspects in their educational environments that encourage, for example, internal diversity (a wide range of possible responses) and internal redundancy (overlap among actors in terms of shared language and activity). As well, their notion of neighbour interactions (Davis and Sumara 2006: 142-147) extends beyond face-to-face physical interactions to encompass varied opportunities for representing ideas, knowledge and practical educational approaches in ways that can create further opportunities for triggering novel responses or reconciling new interpretations. Researching how and whether complexity principles can be applied to different work domains is of increasing researcher interest, for example, in education (Davis and Sumara 2006, Forsyth 2008, Mason 2008), healthcare (Kerrick 2004, Darren 2005, Dennard et al. 2008) and many aspects of business management theory and practice including strategy, leadership, performance, conflict management and corporate social responsibility (Ashmos et al. 2000, Griffin 2002, Kurtz and Snowden 2003, Stacey and Griffin 2005, Fenwick 2007, Stacey and Griffin 2008).

The challenge for researchers and practitioners is that if learning is so emergent, spontaneous and unpredictable, to what extent can invitational qualities and conditions of emergence be fostered or directed within organizations? Citing the conditions of emergence work from Davis and Sumara’s (2006) research, Fenwick (2007: 641-642) believes that in business environments, leaders can play an influential role in prompting more diversity, feedback and interaction through more open-ended approaches rather than enacting control. Griffin (2002) in his research goes further by restating the notion of the twenty-first century
leader as one not of position, but a role of accountability and inclusion that encompass broader worker communities; what he and his colleagues at the University of Hertfordshire call ‘participative self-organization’ (Stacey and Griffin 2005, 2008).

Our view is that Davis and Sumara’s (2006) concepts are analytically useful, but rather than using these or other complexity-based approaches as universal panaceas for designing work environments or learning curricula, researchers and practitioners should regularly interrogate their own contextual environments for potential invitational opportunities that deserve to have attention raised about them. Ocasio (1997) identifies that the work performed in organizations is often based on what decision-makers focus attention on, the context in which it occurs and the ways attention is processed in structured distributed ways to surface what is relevant and significant to the organization. What we believe Davis and Sumara’s (2006) research adds to this attention-based view through their concept of conditions of emergence are ways to create the spaces for learning that have embedded invitational qualities. So by creating common experiential activities (internal redundancy), this also opens up the opportunity to share multiple interpretations of the current problem/issue as each participant naturally contextualises from his or her perspective (internal diversity), which then must be reconciled through interactionally-generated group talk and actions to take the collective next step (neighbour interactions).

Practical decision-making in this sense is a matter of engagement, but not only in an individual agency sense (Billett 2001a, b, 2006). Decision-making becomes not only the privilege of those in positional power, but becomes understood as an accountability and commitment for all workers, since ‘in our daily life, we are largely occupied with the next step’ (Dewey as cited by Schütz 1970: 102). This accountability to take action at work, once initiated, has unfolding public consequences in the performance of work and its effects on others (Kemmis 2004) that change what is next deserving of attention in that context.

This complex of contextual, attentional and interactive effects is difficult to reduce to a matter of workplace curricula that can be universally applicable or represent a limited set of identifiable features. At Council, we are not inferring that management could or should implement a workplace curriculum that explicitly encourages those in acting positions to look for opportunities to improve existing practice as Stella was considering. In the busy flow of daily organizational life, managers and workers can often miss the invitational patterns created by collective work to do something more than achieve the instrumental objectives of work performance and to address the interests of the organization. By considering local and particular opportunities as also having developmental possibilities, managers and workers can shift work momentum towards different directions and destabilise in productive ways that remake practices.

Alerting attention to the opportunities to act differently in guided and reflective ways is a valuable activity and forms the basis of many approaches (e.g. Boud et al. 2006, Reason and Bradbury 2006). In some ways, the character of emergent learning that we have discussed in this paper reflects what Bagnall (2009: 280) recently commented on as the distinction between lifelong education and lifelong learning. As Bagnall (2009: 280) sees it, proponents of lifelong education have tended to constrain and explain learning in terms of institutional
(who provides), epistemological (what bodies of knowledge are privileged) and developmental (from childhood to adult) boundaries. We would add that such a view also shapes a preference for deterministic and simplified approaches to learning. Alternatively, the concept of lifelong learning ‘in its fullest sense exposes its cross-sectoral nature … [requiring] coordination and integration of these multifarious loci’ (Bagnall 2009: 280). The opportunity to experience this diversity and contextual richness emerges from the unfolding social interactions that characterises working, learning (and living) together in a complex world.

Conclusion

Our paper has argued that the relationship between learning and work is a complex kind of relational interdependency that is not adequately expressed by limited co-participation metaphors between group and individual, individual and environment or individual engagement and workplace affordances as suggested by causative models of learning. Instead we conceptualise learning work as a generative collective endeavour created from changing patterns of interactional understandings with others. Actors use complex contextual and relational resources to jointly determine the practical matters of work. Often in guided and spontaneous ways, these resources can shape the conditions of emergence and invitational opportunities that expand what is possible to learn when work practices also become learning practices.

References


Blumer, H. and Morrione, T.J. (2004), *George Herbert Mead and Human Conduct* (Walnut Creek: Rowman AltaMira).


