## Participatory practices at work

# Stephen Billett, Michelle Barker & Bernie Hernon-Tinning Griffith University, Australia

This paper discusses workplace participatory practices -- the reciprocal process of engaging in and learning through work. The reciprocity between the affordance of the workplace (its invitational qualities) and individuals' engagement in the workplace is proposed as a means of understanding how learning through work proceeds. How workplaces invite individuals or cohorts of individuals to participate in and learn through work can be understood in terms of how they are afforded opportunities to engage in activities and interactions that are central to the values and practices (i.e. continuity) of the work practice. These affordances are shaped by workplace norms, practices and affiliations (e.g. cliques, associations, occupational groupings, employment status) and are often characterised by contestation and inequitable distribution. Access to opportunities for practice, and therefore learning, is directed towards sustaining the work practice and/or the interests of particular individuals and groups. Nevertheless, how individuals engage in and learn from work is also shaped by their agencies, which are a product of their values, subjectivities and identities. These reciprocal processes of participation in workplaces are illuminated through an analysis of the micro-social processes that shape the participatory practices of three workers over a six-month period -- a union worker, a grief counsellor and a school-based information technology consultant. The findings illuminate the bases for participation, performance and learning for each of the three workers.

### Work, participation and learning

An account of how micro-social processes shape activities, actions and learning in workplaces is advanced here. An analysis of these processes in workplaces, referred to as workplace participatory practices, is used to identify and illuminate the bases for participation in and learning through work. These processes are held to shape how work is enacted and what is learnt through engagement in work activities. The need to understand workplace participatory practices arose from earlier work (Billett 2001a; 2001b) which found that, whether engaged in everyday work activities or in intentional guided experiences in workplaces, how workplaces afforded access to work activities and the guidance of more experienced co-workers determined the scope of what could be learnt about work practices. Moreover, how individuals construed what was being afforded them as meeting their needs, determined how they engaged in and learnt from the work activities. So there was evidence of the significance of interaction between individuals' agencies and the affordances of the social practice that were reciprocal and negotiated. These findings also illuminated aspects of the inter-psychological processes (Vygotsky 1978) – those between individuals and social sources – that occur when workers engage in goal-directed actions and interactions with other workers and other social sources of knowledge in workplace settings. In particular, bases were identified for how micro-social processes shape learning at work, moment-by-moment or as Rogoff (1990) refers to it – micro-genetically.

Individuals' engagement in a social practice, such as a workplace, is rendered particularly salient because of associations between participation in social practices and learning (Rogoff 1995, Lave 1993) premised on inter-psychological processes. Importantly, as the knowledge required for work practice has social and cultural origins, it needs to be accessed through sources beyond the individual -- inter-

psychologically. Therefore, the kind of workplace activities individuals are permitted to engage in, and the quality of interactions they can access, shape their learning of the historically, culturally derived and situationally constituted vocational knowledge (Billett 2001a). More than just completing a task, engagement in work activities can induce lasting cognitive legacies as individuals' knowledge will be changed in some ways through engagement in these goal-directed activities. This change arises through the reinforcement or refinement of what individuals already know, or the extension of what they know. It follows, therefore, from a socio-cultural perspective (e.g. Rogoff 1990, 1995), that participation in workplace activities has rich associations with learning. Similar associations are identifiable in anthropological accounts that link practice with learning (e.g. Pelissier 1991, Lave 1993) and the cognitive constructivist perspective (e.g. Anderson 1993, Shuell 1990) that holds engagement in goal-directed activity as the basis of learning through problem-solving. The process of learning advanced in these different accounts is best explicated through a consideration of micro-genetic development (Rogoff 1990). That is, learning is shaped through moment-by-moment interactions and engagement in activities that are constituted by the micro-social processes of the social practice (e.g. workplace). Engagement in routine work activities serves to reinforce and refine existing knowledge, whereas engagement in new activities and interactions is generative of new knowledge.

Therefore, central to understanding the pedagogic bases of learning through work is how opportunities distributed for its access are shaped by the norms and practices of workplaces. In recent work (Billett & Boud 2001), differences in workplace affordances were recognised across three areas of the same workplace, with identifiable consequences for learning in each. The work area that was most invitational was held to be most conducive for engaging learners in the kind of learning required for effective work practice. This finding has more than instrumental implications for workplaces. Individuals were seeking to exercise their subjectivities and achieve life goals through their participation in the workplace. They were interested in learning that knowledge which would support their continuity (e.g. sustained employment, promotion, transfer) and personal goals. Where the invitational qualities were low, learning was often directed towards self-preservation and a deepening cynicism towards the employer developed, as well as other outcomes that were counter to what individuals sought.

Participatory practices are also a key element of work requirements, as individuals are required to negotiate and practice -- participate -- in these environments. That is, the need to work with others, understand changes in workplace goals and the requirements for performance are salient for both the workplace and the individual. Therefore, in order to advance an understanding of the requirements for work, learning through work and workplace pedagogical practices, it is necessary to illuminate and elaborate further these reciprocal participatory practices. In the following, what constitutes workplace participatory practices is outlined and discussed. Then, the procedures and findings of a recent study of the requirements for work and the microsocial processes that constitute the reciprocal workplace participatory practices are discussed.

### Workplace affordances and individual engagement

Whether considering learning through everyday work activities or through intentional workplace learning activities, reciprocal workplace participatory practices have been identified as ultimately shaping this learning (Billett 2001b, Billett & Boud 2001). On the one hand, is how the workplace affords opportunities for individuals or cohorts of individuals to participate in and learn through workplace activities and interaction and, on the other, is how individuals elect to engage in the workplace. Rather than being 'informal', as workplace learning is often and erroneously labelled (e.g. Marsick & Watkins 1990), these experiences are usually structured and rendered intentional by workplace norms and practice (Billett 2002).

### Workplace affordances

The kinds of activities individuals engage in are the product of the workplace's micro-social processes (Engestrom & Middleton 1996). Although reflecting historically and culturally-derived practices, the knowledge to be constructed for effective work performance, the kinds of problems to be solved and what constitutes an acceptable solution, and (Billett 2001c) workplace participatory practices are all constituted by situational factors and local negotiations (Engestrom & Middleton 1996, Suchman 1996, Wenger 1998). When individuals engage in workplace activities, they are invited and expected to learn and practice tasks that contribute to the workplace's continuity. The bases for this continuity often go beyond sustaining levels of profitability or service. They also include maintaining the standing and employment of individuals or cohorts of individuals in the workplace. Consequently, opportunities are afforded in ways to sustain the work practice and/or particular interests in the workplace. The standing and well-being of particular affiliates (Bernhardt 1999, Darrah 1996) or workplace cliques might determine in what ways individuals are permitted to participate in and learn from their work. Given the presence of these interests in the workplace, workplace practices and affiliations can lead to contestation being exercised over the distribution of work activities and support for participation and, hence, learning. As workplaces are often contested (e.g. Darrah 1996, Hull 1997), the distribution of workplace affordances is far from being benign. Instead, it is influenced by workplace hierarchies, group affiliations, personal relations, workplace cliques and cultural practices, which distribute opportunities to act and interact in workplaces (Billett 2001a). Put baldly, opportunities to participate in and access support and guidance are distributed in ways that reflect political and power relationships (Solomon 1999, Beriema 2001). For instance, Bernhardt (1999) has identified how, in order to safeguard their own employment, full-time retail workers in pharmacy chain stores restricted the activities and learning of part-time employees. Then there is the inevitable tension between labour and management in which work practices might be directed to support a division of labour that assists management's control over the workplace (Danford 1998).

These tensions are constituted by and played out in workplace settings. It follows from the discussion above that the kinds of participation individuals are permitted and, in turn, elect to engage in, are central to understanding the enduring cognitive consequences (i.e. learning) that arise from their participation in social

practices such as workplaces. For instance, individuals who are denied support may have more limited learning opportunities and outcomes than those participating in new activities supported by experienced co-workers.

However, the situational factors and local negotiations that constitute social practices are in constant transformation. Workplace affordances, in terms of tasks, goals, interactions, participants and relations, constantly change. This dynamic quality reinforces the salience of understanding the ongoing negotiated relations between individuals and the social practice that constitutes participatory practices, as both the bases for the workplace's continuity and individuals' goals are transformed and also transform the practice. More than being once-off sources of knowledge, inter-psychological processes that result in a fixed interpsychological outcome (Vygotsky 1978), they are necessarily ongoing for individuals to perform adequately, and understand the changing requirements to participate in the social practice.

## Individuals' engagement

Despite goal-directed activities and interactions and their distribution being shaped by social norms and practices, individuals also exercise their agency in determining how they interpret and engage in social practice. Ultimately, this agency decides what they learn through their engagement. This agentic action and its exercise are shaped by individuals' personal histories and are constituted in the form of subjectivities and identities (Sommerville & Bernoth 2001). Individuals participate simultaneously in a number of social practices (Lave & Wenger 1991). However, the quality of their engagement in these practices will not be uniform. Full-bodied participation in one social practice can be contrasted by reluctance in another. The degree to which individuals' engagement is full bodied is influenced by their values, beliefs and sociocultural background (Mak, Westwood, Barker & Ishiyama 1998). For example, workers of South Vietnamese heritage rejected teamwork in an American manufacturing plant, as they believed this work practice reflected the very communal, indeed communistic, values and practices they had fled Vietnam to avoid (Darrah 1996). Central to these local negotiations and participatory practices are individuals' agency that shapes how they engage with what is afforded them. Agentic action is guided by the learners' identities and subjectivities, which are themselves socially-derived through personal histories. Therefore, individuals' participation in social practice and the processes underpinning learning are interdependent. Learning through engagement in social practices such as workplaces, is not a unidirectional process of socialisation or enculturation as the mere reproduction of situational values and practices (e.g. Giddens 1984). Individuals' subjectivities have social geneses that are shaped through participation in different social practices throughout their life histories. This positions the social as much an individual as a collective phenomenon. Individuals' interpretation of and engagement in social practices and the learning that occurs through that participation will always, be unique in some ways to their personal histories and subjectivities (e.g. Billett 1997, Valsiner & van de Veer 2000). So there is an interdependence between what is afforded individuals by social practice and how they elect to engage with and construct what is afforded them by the social practice.

## Interdependency between affordances and agency

The bases of interdependence between individuals' agency and engagement in social practice are multiple, complex and overlapping. In considering relations between the personal and social, Valsiner (1994) refers to the 'relatedness' between the individuals' values and the mores of the social practice. Individuals' agentic actions are directed to sustaining and extending their practice in ways that are not always consistent with the goals of the workplace. The exercise of their agentic action might even lead individuals to disassociate or disidentify with the social practice (e.g. Hodges 1998). Tensions arise when the kinds of participation individuals desire are not afforded by the workplace. A workers' pursuit of promotion and learning the kinds of skills required for promotion might be inhibited by workplace practices. For instance, in one study (Billett 2001b), a worker who had fitting skills, but who was employed as a production worker, used his two-way radio to listen to fitters fixing and maintaining parts of a manufacturing plant, as this was work he prized for himself. At meal breaks, he actively sought out the fitters to learn more about their work. However, his efforts were frustrated by restrictions on the number of fitters that could be employed, and the safety officer's concern that restricted his attempts to observe and talk to the fitters in areas that were off-limits to production workers. There are potential tensions between the individuals' goals for the continuity of their practice and the workplace's practices that are directed to its continuity (e.g. the need for certain skills, numbers of workers, achieving service or production goals).

Understanding further these reciprocal processes contributes to key discussions within psychological theorising about the relations between individual cognition and the socio-geneses of knowledge (e.g. Cobb 1998, Rogoff 1995, Scribner 1997, Valsiner & Van de Veer 2000). Valsiner (1994) refers to this process as the co-construction of knowledge, the reciprocal act of knowledge construction through which both the object and the subject are transformed. Analogously, engagement in work activities are held to be co-participative --constituted by the relationship between how the work practice affords participation and how individuals elect to participate in the work practice and engage with what is afforded. More than just influencing engagement in work, these co-participative practices are also held to mediate individuals' learning (Billett 2001a). That is, if cognitive change arises through engagement in goal-directed activity, the basis of that engagement (e.g. whether it was full-bodied or not), and the purposes of individuals' engagement (e.g. superficial compliance or relates to core interests) will influence the kinds of learning that transpires.

The concept of co-participation may help understand the emerging concepts of the social geneses of human cognition. This is because these conceptual premises assist understanding how: (a) the social practice (e.g. workplace) affords opportunities; (b) how individuals' decisions to engage in social practice influence their learning; and (c) the interdependence between (a) and (b) make useful contributions to understanding the relations between social practice and individuals' learning through work.

### Illuminating three work practices

The study reported below aimed to describe and understand further these workplace participatory practices and their consequences for learning through work. These practices are described and illuminated through an analysis of the micro-social processes that comprise the participatory practices of workplaces.

## Procedures

The procedures comprising this investigation are two interrelated sets of activities. The first mapped the requirements for three participants' work practice and the second investigated their workplace participatory practices. Key questions guiding the inquiry were:

- (i) In what ways does the social practice of work afford participation?
- (ii) What is the range of bases by which individuals participate in the workplace?
- (iii) How does co-participation and its consequences differ across workplaces?
- (iv) What are the consequences for learning arising from co-participation?

The first phase described the work in which the subjects were engaged, including their participatory practices. Three individuals were selected for participation in the project. The goal was to identify individuals who engaged in different kinds of work and work practice, including at least one who was a contingent worker (i.e. part-time, contractual or home-based). The participants selected for the investigation were: (i) a trade union official; (ii) a grief counsellor at an institute of forensic pathology; and (iii) an information technology (IT) consultant to five primary schools. The work and work practices of each of these workers were quite distinct. A scheme of *Activities* and *Interdependencies* (Billett 2001a) was used to describe the three individuals' work practice over a four-week period through processes of interviews and observations. Using the literature on work, work practices and participation in workplaces, a scheme was developed to describe work practice and the requirements for work and predict the kinds of learning arising through workplace participation. Whereas both categories can be used to identify workplaces' affordances, the *Interdependencies* were used specifically to gauge aspects of individuals' engagement in work. Direct observation of work and interviews were used to describe the work practice. Data were gathered and analysed about: (i) the requirements for that work practice; (ii) the learning predicted to arise through their participation; and (iii) factors assisting or inhibiting participation.

The second phase comprised a six-month investigation of the workplace participatory practices of the three workers. Commencing, progress and summative interviews with the participants were conducted throughout the six-month period, using sets of items designed to map the trajectories of both the work practice and the subjects' participation in their work practice. The interview schedule was used to guide the process of describing the individuals' work activities and participatory practices based on the dual concerns of workplace affordances and individuals' engagement.

Data derived from the observations and interviews were analysed using the refined scheme of activities and interdependencies. The workplace data provided descriptions of the requirements for performance and factors assisting and inhibiting participation, and how they evolved over a six-month period. The analysis considered bases for the continuity of the workplace and how these were reflected in their participatory practices and also the continuity of individuals' practice as reflected in their engagement in the workplace, making comparisons across the three sets of participatory practices.

## **Findings**

The study illuminates and contrasts the three subjects' work practices, the requirements for competent work practice and participatory practices. Overall, the analysis identifies and compares the requirements for their work, how these individuals participated in work and the kinds of learning they secured through their work. However, the key focus of the data presented here is to discuss workplace participatory practices and their associations with learning. The analysis is presented in terms of bases of continuity, both those of the workplaces' and individuals' practice.

# Continuity of work practice

The bases for the continuity of each work practice need to be elaborated to understand their goals and premises for permitting and encouraging participation. The trade union exists because of a need for the industrial and professional representation of its members. To sustain itself, the union has to be positioned to address members' needs and to advocate for the public sector and the professional standing of workers in that sector. As government policies are central to shaping of the public sector's employment practices, the union also seeks to influence government policy. The union is aligned to one of major political parties (Labor). However, this affiliation is complicated when this political party is elected into government and becomes the employer of the majority of the unions' members. This affiliation brings additional internal complications for the union as some of its officers are also members of factions within the political party and are aspirants to be pre-selected for election as members of legislative assemblies. So there are complex relations between the industrial and professional concerns of its membership and the union's political affiliations. As the union's industry sector is responsive to and services the community, it is also important to be positioned in key debates and discussions about the sector. In addition, the union plays a role in supporting and promoting employee unionism. So its key goals for continuity are to sustain itself through advocacy for its membership, the industry sector, the profession it represents and unionism generally. Given its focus on working with external agencies and negotiating key agreements, the expertise required within the union is premised on the abilities to conduct complex negotiations in industrial commissions, with employers, with governments, in professional forums, and often with organisations that are better resourced in making their case. Hence, the loss of three senior staff in recent months leading up to and during the project tested the capacity of the union to function effectively and strategically. With the departure of these staff, the internal contestation has

intensified, which means that positioning for and support of individuals and their participation in the workplace have become more complex and demanding for some participants. For instance, a campaign to raise awareness in the community about the role of these workers and their workloads, proposed by Anna (our informant) as a highly strategic move, was countered by attempts to undermine her emphasis on professional issues, rather than on the merits of the proposal being advanced. So the changing workplace environment, including the interests of particular cohorts, shapes how Anna is permitted to participate in the workplace.

The forensic pathology centre, where Jim works as a counsellor, has quite different bases for continuity than the trade union. The coronial autopsies the centre performs are a legislated requirement. This means the tasks it carries out are not under threat unless the legislation under which they occur is revoked. As long as the state wants coronial inquests, this work will need to be done. Nevertheless, like any other government body, the centre needs to be seen to be performing effectively to maintain its current level of funding and to secure growth funding (e.g. for an adequate provision of counsellors). However, there are other threats to the centre's continuity in the form of potential privatisation of the forensic pathology function and also malpractice. In a climate of outsourcing and cost cutting, the privatisation of the centre's functions has been canvassed. Recently, another threat to the continuity of the professional practice has arisen from earlier practices in other institutes of forensic pathology involving the unauthorised access to body parts and their retention without consent. This issue, and non-consented retention of human tissue in hospitals, raised widespread concerns in the community, upon which governments in a number of Australian states as well as those overseas have acted. The centre's recently established counselling section plays an important role in addressing matters associated with identification of deceased, processes associated with gathering coronial evidence and assisting those who are grieving as a result of a relative's traumatic death. Although not explicitly intended, the counselling service also plays an important role in managing client relations externally. For instance, the counsellors took the lead role in responding to governmental inquiries and community concerns about the retention of human tissue for coronial and scientific purposes. Internally, along with an ethics committee, the counsellors work to make scientific staff aware of the need to consider their responsiveness to changing community expectations. In some ways, this situation has resulted in the counsellors being afforded autonomy to practise. However, if these practices threaten to disrupt other interests in the workplace, the relations that permit that autonomy could be transformed.

The five state-funded primary schools, in which the information technology consultant (Aden) works one day each a week, play an ongoing role in the community, educating young children. Like other public institutions, the schools have been subject to changes in their work goals and activities. These changes include the requirement for each school to adopt wider administrative responsibilities and be responsive to innovative practices, such as the use of information technology (IT) for both administrative and educational purposes. Responsiveness to departmental initiatives, such as the use of information technology, has become an important performance measure for these schools. As school staff lacked appropriate computing expertise, the five schools collectively employed Aden to provide these services. Much of Aden's initial work was to assist

teachers with routine breakdown and maintenance tasks. So, early in his employment, his tenure as a casual employee was dependent upon working effectively with teachers and their approval of the quality of his assistance with technology for educational purposes. However, departmental directives about the implementation of the Standard Operating System (SOS) caused a change in the schools' priorities. As an effectively functioning IT administrative system became a key departmental goal, there was a reduced emphasis on IT support for educational purposes. The requirement for the establishment and maintenance of this system took precedence over IT support for teachers in the schools that employ Aden. In this way, the continuity of the schools is premised, in part, on being responsive to meet departmental requirements for the use of technology in schools for teaching and administrative purposes.

Having considered the bases for the continuity of the workplace, and on which affordances might be premised, it is necessary to identify the bases on which individuals engage in the workplace.

## Continuity of individuals' practice

Anna's reasons for working in the union are highly consonant with the union's goals and bases of its continuity. She has a deep and long-founded concern with equity and social justice and comes from a family with a tradition of public service. So she enjoys a high level of relatedness with many, but not all, of the core values of the work practice in which she participates. An exception is her growing disaffection with party politics and the union's associations with the Labor party of which she was once, but is no longer, an active member. Her concerns about being closely affiliated with one political party are not shared by many of her colleagues, some of whom are active members of that party's factions. In a system where factional support and numbers can be very potent, this complicates her standing in her workplace, as she is unaffiliated. Also, some union officials are interested in being pre-selected for winnable seats in the legislative assembly. Therefore, their relationships and loyalties are at times ambiguous and different from those of Anna's. So her concerns about the union's close association with the party complicate her interactions with others in her workplace, because of divergent premises for the continuity of career paths and personal beliefs. Also, given her strong professional and social justice interests (and disaffection with party politics), her commitment to some of her colleagues' values is further challenged, when factional politics are used for what she perceives to be short-term pragmatic and selective goals.

Nevertheless, she is skilled in developing and arguing her case through the union's systems of decision-making forums. Her capacities to read, write and effectively present cases are well aligned to the procedures for advancing policies in the union. Through her position, she is able to exercise her interests in social justice issues and commitment to the public sector. Given the high level of congruence between Anna's personal values and subjectivities, and the union's goals for its existence and continuity, it is not surprising that she has not looked elsewhere for work. Yet, she commented that the breakdown of personal relations in the workplace would be the cause for her to consider looking elsewhere. More than the volume, intensity and complexity of her work, the deterioration of workplace relations (i.e. its affordances) presents the key threat to

the continuity to her vocational practice. For instance, she refers to the frustrations about not getting enough support for a campaign to raise public awareness about members' work conditions. Having stated that it is not so much about being undermined, she continued, "It's not a personal investment in it. It's the fact that ... if you listen to any of the organisers and just how bad it is out there and it's the fact that we have an obligation, that's what we're here for. We have an obligation to do something for our members." So here the tension between Anna's own vocational concerns and directions and how these are frustrated by workplace factors is illustrated. She is also concerned that other staff associated with her may become subjected to workplace contestation. Anna works closely with some junior staff whom she believes make significant contributions and will do more so in the future as they grow in expertise. However, she believes that in the - at times - intensely contested work environment, these newer workers may be targeted or marginalised because of their associations with her. In terms of her participatory practice, the work pressure and the shifts in affiliations have meant Anna has to "make more of an effort to contribute more". Despite her growing workload outside the union workplace and her need to address key policy matters, she needs to maintain her standing and engage closely within the workplace. This has required her to direct energy and time to engage more fully in the on-going negotiations in the workplace to maintain her standing.

Jim, the grief counsellor, is engaged in work he is well prepared for, experienced in and finds interesting, challenging and, at times, rewarding. His interest in working directly with clients and providing a public (free) service is central to his beliefs about counseling. He has a strong commitment to the public provision of counselling services and the obligation for government to fulfill its social obligations. He studied and engaged in social work after several different kinds of employment that followed the completion of his undergraduate degree. Nevertheless, despite his commitment, he remains sceptical about and adopts a critical attitude towards counselling. He claims to be open to a questioning of its processes and values. These qualities are in contrast to the professional medico-scientific values and discourses that are the most influential in the forensic pathology centre. At the commencement of the project, Jim was a casual employee. However, during the period of the project, a permanent position was created which he was able to secure. This permanency permitted Jim to enact goals for realising a mode of counselling that is more consonant with his personal and professional beliefs. This included extending the counselling service to include more face-to-face counselling and to a wider clientele. Through the exercise of his agency, he has transformed the counselling practice. In considering the (as yet remote) prospect of privatisation, Jim is adamant that he would not work as a counsellor for a private company as this is antithetical to his values. The continuity of his practice would be so constrained by such developments as to make it very difficult for him to continue his practice under those circumstances.

For Aden, schools are familiar environments. His parents both work in primary education (as a principal and teacher). Most of his life, he has been involved in discussions about and lived in close physical proximity to primary schools. His competence with computers and information technology arose initially through having access to a computer at home as an adolescent. While still at school, he undertook a period of

work experience that permitted him to extend and demonstrate his competence with computers. His academic performance at school was not strong and after he left school his father encouraged his interest in computing through a course in a vocational college. He really wanted to be a sports journalist. His father advised him of the widespread use of computers in schools and potential growth of employment in this field. His mother secured his first job in a nearby school, which subsequently led to employment in four others. Initially, he viewed this kind of employment as paid work experience, but it has since grown to full-time employment. Aden remains concerned that working in schools as a consultant will exclude him from more interesting, prestigious and highly remunerated work in the corporate world. Yet, his current work suits his familiarity with primary schools and presents an environment in which he is comfortable and effective. So although quite content with the work in schools, he could be tempted by an offer from elsewhere, but he is not actively seeking such offers. Aden claims there is "not much work out there" (his mother found only 10 vacancies in a newspaper recently, he reported). However, later he states that his work is now a 'proper job'. It has transformed from being a casual appointment to one that is central to the maintenance of the schools' information system. The job has now been classified within the education system (i.e. a Technology Officer), he is included in staff phone listings and has his superannuation paid for by the department. Therefore, although still a contingent worker, the workplace has come to invite his participation and involvement more strongly, and in ways that reflect his personal goals.

The individuals' life directions discussed above are linked with their subjectivity. That is, the sense of self and identity that individuals projected in their responses was consistent with many aspects of their practice and, in particular, the conduct of their employment. There were some identifiable bases associated with individual subjectivity that shapes their participation in work activities, and directed their energy and agency. Whereas Anna had never sought out alternative employment, Jim would not consider working for a private sector company in a counselling role, yet Aden could be tempted by an offer to engage in the kind of corporate work he cherishes. In order to illuminate the reciprocal process that are being enacted through the three subjects' participation in work, comparisons across these practices are now elaborated to reveal something of their diversity and transformative qualities.

### Comparing workplace participatory practices

Diverse participatory practices were identified from the three informants' data and through observations of their workplaces. These practices had consequences for the conduct of their work and also the work of others. In the highly demarcated professional work environment of a forensic pathology centre, the counsellor was permitted to exercise considerable discretion in his work activities, without the need to consult or seek permission. The centre comprises a number of work areas where quite distinct forms of work are conducted (e.g. dissection rooms where the pathologists and mortuary attendants work, laboratories where scientific testing and analysis are undertaken, storage areas for cadavers and others for samples, counselling facilities, police facilities for investigation and administrative purposes). Functionally, the workplace is characterised by

distinct divisions of labour premised on particular specialist knowledge. Professional autonomy is prized and accepted in this workplace. Staff designated as professionals enjoy discretion within their demarcated area of work. However, the administrative staff and mortuary attendants are not granted the same levels of discretion. Given the relative standing of counselling work, Jim was able to control and direct his work. Much of his work might be described as routine (e.g. only the conduct of a few standard functions – identification of cadavers, counselling, assisting with coronial processes). Yet, given the emotionally demanding and distinct character of each event, its requirements go beyond the mere repetition of frequently performed tasks. It also involves him interacting with other staff in order to perform his work functions. This includes the mortuary attendants who provide information and make the cadavers ready for viewing, working with pathologists to ascertain information to report to or withhold from next of kin and for use in discussions with police officers about the deceased and their relatives. Yet, there is little boundary crossing because the work functions are so discrete. One incident of boundary crossing did occur. Two groups of the mortuary staff sought Jim's advice about a workplace grievance against each other. Jim advised them, even though this was not part of his job description. Later, it came to the attention of a workplace counsellor who objected to Jim's intercession.

The union officer's workplace is more homogenous in terms of activities undertaken, but is characterised by complex workplace decision-making premised on negotiations, collaborations and consultations. Consensual processes of workplace decision-making are used. However, as noted, there are also cliques and affiliations that sometimes use these negotiations to secure their positions or interests. Hence, unlike Jim, Anna's standing and capacity to make decisions are constrained by tightly interrelated and constantly renegotiated workplace relations and affiliations as well as decision-making processes that are open to contestation. Although her work encompasses a broad range of tasks and discretion, ultimately her authority is limited by the executive role of the union Secretary's position. So, while Anna enjoys wide discretion in her work, she is denied a commensurate level of authority. This authority is embedded in negotiated and consensual arrangements, at one level, and highly centralised executive authority of the Union Secretary, at another. In these ways, Anna's capacity to take relatively unilateral actions is quite distinct from Jim's.

The work requirements of Aden, the IT consultant, are constructed through the interactions with the five schools he serves weekly. As a contingent worker, he has been required to maintain positive working relationships with administrators and teachers in the five schools. However, over the duration of the project, the focus and standing of his work changed, which transformed the basis upon which his tenure is premised. As the schools have converted to a departmentally mandated standard system of computer operation and interface, his work has become more focussed on setting up and maintaining that system. As the implementation of this system became a key strategic goal for the schools, the basis of Aden's tenure became highly valued by the schools' administrations. Consequently, he became less dependent upon maintaining his tenure through teachers' appraisal of his performance and more focussed on his capacity to establish and maintain the SOS in the school. As the goals have changed, so too have the participatory practices and range of tasks he participates in.

The differences in and transformations of these participatory practices are explainable by changes in the requirements for work performance and also those brought about by individuals' agencies. Table 1 depicts some of the key bases for affordances and engagement for each of the three participants. In this table, the bases for each workplace affordances and individual engagement are presented in summary and overview. Different bases for affordance are evident across the three workplaces. Also, distinct bases for individuals' participation are summarised. Over the duration of the project in different ways, each participant was afforded the opportunity to exercise and extend his or her vocation. However, there are different bases by which they are able to exercise their participation. Over the six-month span of this study, Jim and Aden experienced expansion in their affordances that permitted them to extend the scope of their practice and their discretion within those practices. Anna, on the other hand, although enjoying wide discretion, did not experience an extension of her practices. Instead, she felt the need to give extra time to manage workplace relations, despite her growing workload. That is, the workplace became less invitational. Taking account of the changes in work requirements and participatory practices is necessary to help understand participation and learning through work.

### TABLE I AROUND HERE

So, here illustrative examples of the dynamic character of social practice and the relations that constitute them are provided. In order to capture their dynamic qualities and identify consequences for participation in and learning through work, the next section attempts to map changes arising from each of the three participants' workplace participatory practices. This is achieved using instances of change in each of these practices.

### Changes to work and participation

Over the six-month period each of the three subjects' work changed. In each instance, there were changes in the workplace's participatory practices. There is evidence of changes in the complex interactions between the affordances of the workplace and individuals' agentic actions, albeit marked by different degrees of the contribution of one or the other. Figure 1 (below), depicts a representation of the trajectories of both the work practices and the individuals' practices, as they changed over time and in relationship to each other over the six-month period. The solid lines are a representation of the individual's trajectory and the dotted lines that of the work practice. These are intended as nothing more than a way of representing the interrelationships between the two trajectories. Key changes and consequences for others are also evident in these relations.

The first one, depicts that, on gaining permanency, JIm was able to transform the counselling practice to be conducted in ways more consistent with his values and beliefs about counselling. So as more face-to-face counselling was introduced, the trajectory of the counselling practice was diverted to reflect Jim's preferences and goals. Yet, there were, however, consequences for others' practice from the introduction of face-to-face counselling. Administrative staff had to learn to handle other tasks (e.g. initial contacts with

clients). These staff often find it difficult and distressing to be the first point of contact with recently bereaved clients. Sometimes the staff respond inappropriately through an (understandable) inclination to want to assist a distressed person on the telephone. This has required Jim to explain to these staff the procedures for making this contact and of his commitments to return the clients' call as soon as possible. He had also to discuss and make more transparent his schedule so that they can advise clients about his availability. In addition, Jim now has to spend time with these staff as well as others for whom interdependencies are essential. There are other consequences arising from Jim's decision to engage in more face-to-face counselling. Firstly, there is an increased presence of grieving clients in the workplace. This means that other workers have to be aware of this and behave appropriately. In the mortuary, humour is deployed as a strategy to manage the demands of what is gruesome and confronting work. The presence of grieving relatives requires sensitivity in the timing and volume of the exercise of humour. Secondly, Jim routinely advises his clients of their right to appeal the conduct of a post-mortem on their next of kin. This could lead to an increased incidence of appeals that have consequences for others' work (e.g. forensic pathologists). He believes these changes are about performing counselling in a way consistent with his values and previous practice. Although aware of the consequences for other staff, Jim is quite unapologetic about the consequences of his changed practice. As foreshadowed, he possesses a strong commitment to and beliefs about counselling, including the rights of his clients and his obligations to those clients.

In Figure 1, the trajectory of the workplace and Jim's practice are represented. It represents the view that the change in the workplace is aligned to Jim's personal trajectory and direction. The changes in the counselling practices at the forensic pathology centre are taken very much as being a product of Jim's agency.

### FIGURE 1 AROUND HERE

In the second set of trajectories, relations with teachers and gaining their confidence were initially important for Aden's work and his standing in the five schools. However, later, when he was given a more strategic role in each of the five schools, his relations with the teachers changed. Both his participation and engagement changed, as did his status. His line of accountability shifted from the teachers to the administration and his task became directly aligned to assisting the school's new strategic direction. Figure 1, suggests that there has become something of a parallel path and accommodation between the trajectories of the workplace and Aden's professional path. The schools' need for the administrative system and Aden's need for more 'corporate work' reflect reciprocity and mutuality at this point in time.

In the third representation of workplace participatory trajectories, change in the intensity and direction of work, periods of absence to participate in an election campaign and changing workplace relations have required Anna to interact and communicate more in the workplace. Her critique of the existing industrial processes has led to intense interactions with some colleagues and she has to direct additional effort to workplace political processes. Given the democratic and negotiated bases for decision-making in this

workplace, processes of engagement and interaction are important. In particular, Anna has argued that the current industrial processes are unable to address many issues associated with the status and conditions of their members. Consequently, a broader campaign is required to raise awareness in the wider community about the conditions of these public sector workers and how successive government policies are eroding the crucial public service provided by these workers. Through such a process she hopes to secure broader goals for the membership. However, some colleagues see this approach as being extra-industrial and marginalising the industrial processes in which their expertise and standing resides. This has led to periods of intense debate within her workplace. With the recent loss of supportive colleagues, Anna is concerned about her capacity to realise these changes to practice. Figure I provides a representation is provided of these interactions and shifting bases for the continuity of the work practices' and Anna's goals. Over the duration of the study, the direction of the union's pathway to continuity seemed to shift away from where Anna's goals reside.

So, there are dynamic qualities to workplace activities and participatory practices evident across these three workplaces. Jim is able to exercise agency, while the changes to his practice and that of the counselling service have become closely aligned. Aden's bases of accountability and continuity have changed and firmed as well. He has clear goals and lines of authority, and his vocational interests and the requirements of the workplace have become more aligned. Anna's participation continues to develop as staff change and affiliations of interest transform in her workplace. This evidence of associations between changes in work and participatory practices illustrates the dynamic social ecology of workplaces and what shapes engagement, participation and learning.

#### Learning

As proposed earlier, there is little or no separation between engagement in the activities that are constituted by social practices and learning. It was also proposed that some activities merely reinforce, while other refine and some extend knowledge. Through their engagement in work activities, and how they engage in these activities associations with learning for the three subjects can be identified. Each reported involvement in new tasks and learning as well as opportunities to refine what they already knew. These opportunities were shaped by the reciprocal participatory practices.

Through engaging in the face-to-face counselling that he prefers, Jim learnt more about the probable client base he will encounter in this workplace. For instance, he has fewer Muslim, but more indigenous clients in this work setting than in his previous position. The latter typically do not want counselling, being primarily concerned with the prompt return of the deceased. So his practice is being refined through day-to-day work. He also had a positive experience with counselling next of kin after an aeroplane crash. This was in contrast to his earlier involvement with on-scene counselling in other disasters. This experience provided the opportunity for him to identify ways in which such interventions could be helpful (i.e. being able to quickly access next of kin, collaborative working relations with police). Jim's consideration of procedures associated

with the global anthrax scare extended his consideration of counselling at the centre and how they would handle interactions with next of kin and the management of mass fatalities.

For Anna, there was evidence of significant new learning in the refinement and elaboration of earlier concerns about how her members' interests were being addressed through industrial processes. This learning was consolidated through the opportunity to prepare papers on these issues for workplace meetings. Her work in a colleague's election campaign reinforced her views about the detachment of the political parties from the community. She has also learnt new knowledge from her participation in a committee that manages retirement funds. Although she has worked hard to understand the complexities of appropriately managing these funds, Anna still feels a novice and not fully understanding the consequences of the decisions she makes. However, one of the roles of the fund's board is to act as a custodian for disputed cases, such as those occurring between competing kinsfolk in the case of an unexpected death. Here, she has found herself able to make a significant contribution, building on the kinds of well-developed advocacy skills she possesses. So she learnt new knowledge, reinforced other knowledge and learnt to apply her advocacy skills in another context.

Aden's work provided learning opportunities mainly in the form of reinforcing how he goes about trouble shooting in the schools. Week in and week out, he was faced with similar tasks and problems, which assist his capacity to be effective in responding to these. His own knowledge has evolved, as he is using strategies to efficiently address many of the routine tasks required to be performed in IT assistance. His use of least-effort strategies is a characteristic of expert performance, according to both cognitive (e.g. Prawat 1993) and cultural (Scribner 1984) psychological analyses of practice. Aden's opportunity for new learning arises from the need to learn how to implement the SOS. This required attendance at a workshop and interactions with staff whose responsibility it was to implement this system. In learning about this system, Aden's role in the schools became placed on firmer grounds.

New activities for all three participants (e.g. considering responses arising from the Anthrax scare, involvement in an on-scene disaster response, involvement in decision making about retirement funds, implementing the SOS) reportedly led to significant new learning. These opportunities arose from events that were structured by workplace practices. They were not ad hoc or incidental; they were central to the workplace's practice and were afforded by workplace circumstances. Some learning will be unintentional (e.g. Anna's learning about shifting power structures, her work on retirement funds, Jim's capacity to compare disaster-support incidents and Aden's heightened sense of worth). Along the way, each of the three subjects elaborated on and refined their knowledge about work through engagement in everyday work activities.

Learning arising from changes in workplace tasks provided different bases for participation. Aden developed valued expertise possessed by nobody else in the schools; Jim exercised his preferred mode of conducting his practice; and Anna was able to position the debate (direction) of the union by questioning some of its key emphasises. Central to this learning is the relationship between what was afforded by the workplace and how the three individuals selectively engaged in ways that sought to address their interests and vocational direction.

# Workplace participatory practices

The data presented and discussed here are used to illuminate how workplaces' micro-social practices reciprocally shape participation and learning. They elaborated the contention that participation and learning are premised on deliberate intentions. So while there will always be unintended learning, there is an intentional basis to the workplace experiences that are afforded to and engaged in by individuals (Billett 2002). This intentionality arises from the kinds of micro-social processes identified above. Corresponding with the intentionality of the workplace (i.e. its affordances) are individuals' decisions about how they elect to engage in the workplaces. For example, the decision of a grief counsellor to conduct face-to-face, rather than phone-based, grief counselling was a product of his earlier practice. This decision transformed both the counselling work and the work of co-workers. Significantly, the counsellor's change in work practice coincided with his movement from temporary to permanent employment. So, this change in practice is premised on a complex of factors comprising the enactment of the individuals' agency, premised on the capacity for relative autonomous practice that arose from employment status (i.e. a workplace affordance), yet which was of a kind not afforded to other workers. In all, this single change transformed work practices, bases of participation and requirements for performance. This example of workplace participatory practices illustrates how opportunities for change, learning and development are distributed across the workplace. For instance, workers with less discretion (e.g. the mortuary and administrative staff) may be subject to the changes of others and not be able to intentionally transform their participatory practices and learning, as others in that workplace were able. So, just as the teachers in the schools experienced a reduced level of technical support when the schools' priorities for information technology changed, the administration in the forensic pathology centre had to learn to accommodate Jim's changed schedule. These examples indicate different bases for the continuity of the practice that are exercised through participatory practices.

In all three cases, there was evidence of the exercise of individuals' agency in shaping the organisation of their work. This agency was associated with their preferences, beliefs and values -- the participants' subjectivities and identities, and how they view themselves in relation to the workplace's activities and tasks. The exercise of personal agency varied over time and circumstances, and more so for some of the participants than others. In these ways, the study illustrates just some of the complexity of the inter-psychological processes occurring through work and the micro-social processes that support this learning. Given that micro-social practices play such a salient role in this analysis, it is timely to consider afresh the social ecology of workplaces. As in Somerville and Bernoth's (2001) study, individuals' subjectivity provides an explanatory principle for the direction and shaping of individuals' agency. This agency appeared to be most exercised when there were threats to their subjectivity and identity, brought about by changes in the workplace or where the individual had the opportunity to exercise their agency.

In conclusion, this initial analysis of the micro-social processes that comprised the three workers' work activities and participatory practices illuminates the multifaceted bases for participation in and learning

through work. It also illuminates the complexity of contributions that shape microgenetic development (Rogoff 1990) – the moment-by-moment learning that occurs through engagement in conscious thought which draws upon historical precedents, cultural requirements and situation contributions.

#### FIGURE 2 ABOUT HERE

So, when considering learning through work or the development of a workplace pedagogy, the relations between the kinds of micro-social process that constitute workplace participatory practices and their consequences for micro-genetic development need to be accounted for (see Figure 2). These processes are richly intertwined and interdependent. Such propositions and the kinds of evidence advanced above strengthen the interrelationships among learning, doing and participation in social practices. Evidence is advanced of the relations between workplace participatory practices and learning as being richly associated. Consideration of one suggests the need to consider the others.

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 $Table \ i-Bases \ of \ affordance \ and \ engagement$ 

Participant	Bases for affordance include:	Bases for engagement include:
Jim –	Change to permanent employment	Professional practice –desire to direct work practice
extension	Opportunity to exercise discretion	Strong belief in the importance of approach
of practice	Privileging of professional autonomy	Capacity to enact preferred practice
_	Clear role demarcations	
	Support from other (senior) counsellor	
Ana –	Work role	Commitment to public sector and community care
broad	Discretion to embrace a wide scope of activities	Commitment to democratic work processes
campaign	Democratic workplace practices and values	Experience in the sector
	External role	Capacities to present and argue a case
	Workplace cliques and affiliations	
Aden –	Acceptance of his expertise	Expertise in the area of work
standard	Enhancing the standing of his work	Familiarity with schools
operating	Increased engagement with schools	Interest in information technology
system	Provision of tasks through which he can develop	Level of engagement
	and contribute to the schools	

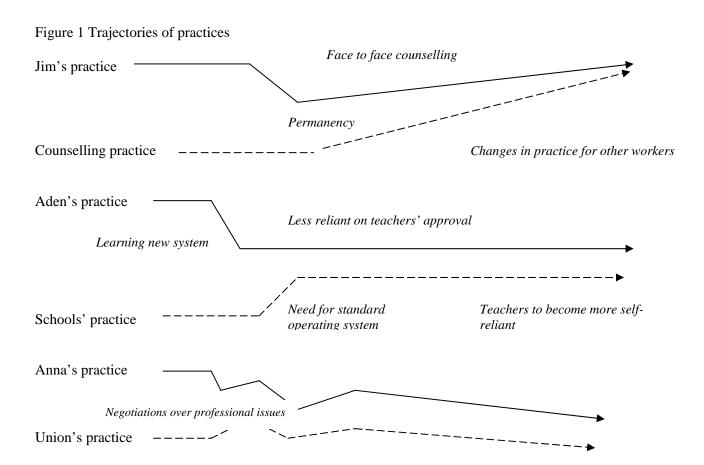


Figure 2 – Relations among learning, activities and participation

