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Building Trust: OHS Management in the Mining Industry

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Abstract

Trust has been identified as important in facilitating improved outcomes in work health and safety through improved communication, co-operation, acceptance of decisions, knowledge sharing, organisational functioning, and other means. Trust (and mistrust) is a particular concern in the Australian mining industry. This paper examines how mistrust may be overcome and strategies for nurturing trust, between management and workers, between corporate and mine site management, and between management and unions.

1. Introduction

In recent years, there has been increasing interest in the role of trust in shaping occupational health and safety (OHS) practices and performance. Trust has been identified as important in facilitating improved OHS outcomes through a variety of means, including communication (Reason 1997), maintaining co-operation (Morgan and Hunt 1994), promoting the acceptance of decisions (Tyler 2003), improving knowledge sharing (Dirks and Ferrin 2002), supporting all aspects of organisational functioning (Bijlsma and Koopman 2003) and enhancing safety performance (Barling and Hutchinson 2000). Concern about the role of trust in shaping OHS outcomes has been particularly strong in the mining sector, where antagonism between workers and management is often deep seated and where building trust is a particularly challenging and tenuous enterprise.

Nowhere is this more apparent than in Australia. For example, the 2005 New South Wales Mine Safety Review identified a “debilitating mistrust between the members of the tripartite process” (Wran and McClelland 2005, 7) as a principal obstacle to improved OHS in the mining industry, and the New South Wales Minerals Council concurred that mistrust remains the most significant impediment to improving the safety climate within the industry (NSWMC 2005). In Western Australia, the Ritter Report (2004) similarly documented the enormous difficulties of successfully implementing managerial OHS strategy where there was antagonism between workers and management, while a Queensland report pointed to a series of disputes that have “had a detrimental effect on the level of co-operation and trust between the trade unions and mine and to “the antagonistic and confrontational climate that has developed [that] cannot be conducive to optimal safety and health outcomes” (ACiL 2005, 113). While that mistrust is stronger in some sectors than in others (and it is particularly strong in underground coal) it nevertheless permeates and often poisons constructive dialogue in a wide range of circumstances and sectors of the mining industry.

Yet despite the potentially debilitating effects of mistrust on OHS performance, our understanding of how and why it develops, what its consequences are or how best to overcome it, is very limited. Only “a limited number of researchers have examined the concept within the realms of safety research” (Cox *et al* 2004), and “the exact nature of trust and its role in shaping organizational safety is poorly understood” (Conchie *et al* 2006, 1097). Perhaps unsurprisingly therefore, the current consensus is that “the formation of trust within workplace relationships is complex and elusive” (Zeffane and Connell 2003, 4).

In previous work, we examined the relationship between mistrust and OHS performance in the Australian mining industry. Based on fieldwork in ten mines and on interviews with over 120 respondents within the mining industry, we concluded that there was indeed a strong relationship between OHS performance and the degree of trust at mine site level (Gunningham and Sinclair 2011). In this working paper, rather than elaborating on the adverse effects of mistrust we focus on how it might best be overcome and on strategies best capable of nurturing trust, not only between management and workers, *but also between corporate and mine site management, and management and unions*. Such an enterprise is important because although there is a growing body of literature on how to establish a safety climate more broadly, little is known about “how trust can be increased in organizations experiencing low or fragile levels of trust” (Cox *et al* 2006, 1136).

We begin by outlining our research methodology, and giving a brief overview of the nature of mistrust in the Australian mining industry and our previous research findings, before devoting the substantial majority of the article to potential means for building trust. Drawing on the experience of mines that have been most successful in building trust and comparing them to those where mistrust is rife, we argue that there are a number of practical steps that corporate management, mine managers and other mine site personnel can take that serve to develop trust. Where practicable we also draw on the broader albeit limited literature on trust to build a composite, but provisional, picture of the architecture of trust in the mining sector. Many of the measures that seem necessary to build trust in the mining industry appear to have application to other industries and other circumstances.

2. Methodology

Our broader research project was principally concerned with understanding the ways in which mistrust may inhibit constructive interactions between stakeholders, (particularly at mine site level) and mapping the consequences of mistrust in terms of OHS outcomes. To address these issues we adopted a study design based on in-depth interviews with corporate and mine management, trade union officials and miners themselves. Our sample of firms was ten mine sites, in three separate companies, in two separate jurisdictions (New South Wales and Queensland), where we hypothesised we would find sufficient variation between high and low performing mines (in terms of OHS) and between levels of trust, as to reveal critical relationships between them. A particular advantage of studying behaviour at different facilities within the same company was that it enabled us to hold constant a number of variables (as where the company uses the same set of management tools to improve OHS outcomes at all its facilities) while enabling variation in others (differences in trust at mine site level).

Rather than begin with the question of trust, therefore, our initial focus was on measuring OHS performance and on ranking mines in these terms. Although many of the current statistical measures (for example, lost time injuries) have potential flaws, a combination of these, OHS audits, and the increasingly sophisticated *internal* tracking measures that have been in existence for several years, provided sufficient sensitivity and reliability to identify high and low OHS performing mines for the purpose of this project. We also asked senior officers in participating companies themselves to rank their mines in terms of OHS performance. Triangulating this data allowed us to identify clear groupings of high and low OHS performing mines across the three companies (although we were less confident of precise rank order). In order to sharpen contrasting experiences, those mines that were located close to the middle of the OHS performance spectrum were excluded from the study.

We conducted semi-structured interviews at each mine over two-day period with a representative sample of both staff and workers (120 in total). A typical sample of twelve interviewees from each mine included the general or operation manager, mine manager, shift or process supervisors, under manager, safety officer, engineering (mechanical and/or electrical) managers, crew leaders (deputy under managers, team supervisors), and workers and tradesmen (including local check inspectors/site safety representatives). In most cases the balance of managers to employees was split approximately evenly. Each interview was conducted in private, with interviewees informed in advance that all material arising out of the interviews would be treated confidentially, and used anonymously in any subsequent publications. In addition to the mine site interviews, representatives from corporate management, including chief executives, safety managers and operational managers, across the

three coalmining companies included in the project, were interviewed. A total of twelve corporate interviews were conducted.

Qualitative material generated by the interviews was supplemented by reviews of both the domestic and international literature. The three mining companies involved in the project also provided internal policy background and safety statistical information and audit data (on a confidential basis).

3. Mistrust in the mining industry: A context

For present purposes, trust can be regarded as “an individual’s belief or common belief among a group of individuals that another individual or group (a) makes good faith efforts to behave in accordance with any commitments both explicit or implicit, (b) is honest in whatever negotiations preceded such commitments, and (c) does not take excessive advantage of the another even when the opportunity arises” (Cummings and Bromley 1996, 302). In the particular context of relationships between workers and management, trust can be best understood as an individual’s willingness to rely on another person based on expectations that he or she will act safely or intends to act safely. For example, management (which particularly in underground coal mines has limited capacity to monitor or control workers directly) might trust workers not to cut corners, or break safety rules or take unreasonable risks. Workers in turn may trust management to keep them safe (Risk Analysis 2006).

In Australia the mining industry has been beset by rampant mistrust between the major stakeholders for many decades. Workers and management have been polarised on a plethora of issues and relations between the relevant trade unions and mining companies are often acrimonious. Many managers express a strong mistrust of union dominated workforces in general and of union representatives in particular (although, there are notable exceptions) and even in the absence of trade unions, they regard the entrenched attitudes and behaviours of many mine workers as being antithetical to modern management practices, and as making it very difficult to improve either productivity or safety outcomes (which they regard as going hand in hand). Many mine workers, and certainly trade union representatives, have an equally deep mistrust of, and hostility towards, management, borne in no small part from a history of death, injury and disease for which employers were, historically, hardly blameless (Hargraves 1993; Shaw and Bruns 1947). Lockouts, strikes, and the ruthless use of leverage (by both sides depending on the economic climate) have also left their scars and stories (for example, concerning the brutality of the lockout of 1929) are passed down from one generation of miners to the next (McColl 1982), reinforcing negative stereotypes.

Beyond worker/union and management relationships, corporate and mine site management interactions are also susceptible to mistrust and its corrosive impact on OHS outcomes, as are the lower levels of the management hierarchy. As corporate management has increasingly sought to impose uniform safety standards and systems across different mine sites, so to has their been a build of suspicion and resentment on part of middle management struggling with increasing administrative responsibilities, and fearful of exposure to safety prosecution by the inspectorate.

Our empirical work led us to conclude not only that there is a strong association between low trust and low OHS performance but that there are a *cluster of characteristics* that are strongly associated with a heightened presence of mistrust at lower OHS performing mines (for further detail, see Gunningham and Sinclair 2011). Briefly, these are: (i) a catalytic event (as for example where management “cut coal”

during a strike); (ii) a divided workforce (with distinctive and antagonistic groups of workers); (iii) mixed messages, inconsistent actions (for example where management promotes a “no-blame” culture, then criticises workers when reporting incidents); (iv) a high turnover of senior mine management (in some cases mines have lost approximately 50% of senior management in a single year); (v) closed management style (including a reclusive management team; a lack of communication and consultation, and issues of ownership of safety initiatives); (vi) underutilised, isolated or ineffectual line management (in particular, crew leaders that are “sandwiched” between workers and management; (vii) certain organisational structures (in particular, fixed shifts and hierarchical shift management); and (viii) a resentment of corporate intervention (middle managers in particular are increasingly frustrated by additional safety-related paperwork and obligations flowing from corporate safety initiatives). While different mines exhibited different combinations of these characteristics, nevertheless, the overall conclusion was clear: the greater the number of these characteristics exhibited at any one mine, the greater the likelihood that mistrust will impact negatively on safety processes, practices and outcomes.

4. Nurturing trust: Corporate and mine-site strategies

Drawing on the experience of mines that have been most successful in building trust and comparing them to those where mistrust is rife, we argue that there are a number of practical steps that corporate management, mine managers and other mine site personnel can take that serve to develop trust. We also draw on the broader albeit limited literature on trust to build a composite, but provisional, picture of the architecture of trust in the mining sector. Such an enterprise is important because although there is a growing body of literature on how to establish a safety climate more broadly, little is known about “how trust can be increased in organizations experiencing low or fragile levels of trust” (Cox *et al* 2006, 1136). Many of the measures that seem necessary to build trust in the mining industry appear to have application to other industries and other circumstances.

4.1 Corporate safety leadership

As is widely acknowledged, the role of senior management in creating trust is crucial (Hopkins 2002, Whitener *et al* 1998). Senior management sets the priorities, establishes the values, and provides the resources that substantially shape mine management and workforce responses. Messages conveyed by senior management, particularly as to whether and how much they value safety and the wellbeing of the workforce, are part of the composite picture that workers develop as to the company’s motivations and behaviour. As Conchie *et al* (2006, 1152) point out in their overview of the trust literature, “a good organisational safety culture typically relies on good safety leadership [that] promotes shared values and commitment to an organization’s safety policies”.

Our own research supports this view, but it also highlighted three related and important issues. First, we found a number of instances where the absence of leadership at corporate level served to undermine site level initiatives. For example at one mine in our sample, mine management had managed with some difficulty to establish a genuine reporting culture and, unsurprisingly, the number of reported incidents had risen. The manager was then criticised by corporate management for the worsening safety performance of the mine, as measured by incident reporting. This unsurprisingly served to undermine both the credibility of the reporting initiative and the leadership of mine management who had promoted it.

Second (and closely connected to the above) a lack of corporate leadership can exacerbate mistrust at mine site level, with adverse consequences for OHS. Strikingly, the three lowest OHS ranked mines in our sample (one from each company) displayed the highest levels of mistrust towards corporate management. In one case, mine management viewed corporate OHS interventions as an unwelcome and unjustified intrusion into their internal affairs, while two others doubted the competence of corporate management to fulfil their stated OHS ambitions, and perceived their intervention as an expression of corporate mistrust in mine management's own competence. In contrast, at many of the better performing mines there is far more acceptance of the desirability, effectiveness and benefits of corporate OHS interventions.

Third, we found that senior management commitment was a necessary but not a sufficient condition for the success of OHS initiatives. For even where senior management set high health and safety standards, developed an ambitious corporate OHS vision, disseminated the safety message widely, and introduced sophisticated safety management tools, their efforts were still likely to be rendered ineffective if either (i) mine management mistrusted corporate initiatives, or (ii) there is such mistrust at the level of the workforce sub-culture that even well intentioned management initiatives are treated with cynicism and undermined. In these circumstances our findings suggest that even the existence of advanced and sophisticated tools of internal management regulation (including OHS management systems) may be insufficient to deliver improved OHS outcomes at mine site level (Gunningham and Sinclair forthcoming).

In terms of building trust, and through it, improved OHS, these findings have two important implications. First, unless the mistrust of the workforce can be overcome then even the most well-intentioned and sophisticated management initiatives will be treated with cynicism and undermined. Our findings suggested that without trust workers treated almost all corporate management safety initiatives with suspicion and refused to buy into them. Safety observations were perfunctory, incident reporting was trivialised or ignored, systems were more honoured in the breach, and sophisticated electronic monitoring systems were side tracked. Second, mine management leadership on OHS (and middle management commitment) is every bit as important as corporate leadership and worker mistrust will not be overcome without it. Indeed, the majority of workers do not identify with corporate management, and are largely unaware of them. This emphasises the importance of personal relationships and daily contact with mine site management in providing the opportunity for the demonstration of safety leadership.

Accordingly, developing mechanisms that build a cooperative relationship between mine site management and the workforce and that obtain worker "buy-in" to management based initiatives will be crucial. These issues are further explored below.

4.2 Mine management leadership

Although the management literature emphasises the importance of leadership, for the most part, what is contemplated is corporate leadership. Far less recognised is the importance of leadership at facility (mine site) level, which in the mining industry suggests a key role for mine managers. Not only must mine management espouse the value of a safe workplace, they must also demonstrate their commitment to that value by their actions. Unless mine management "walks the talk" then worker cynicism about management motivations will remain high.

Our research revealed the attitude of mine management to be particularly important because, as numerous workers and middle managers told us, the level of safety that a mine achieves, is in very large part the level that the “boss” wants. And from their perspective, the boss for all practical purposes is the mine manager (who they see almost daily and whose impact upon them is direct and visible), not the company’s remote corporate management. Thus it is mine management’s perceived integrity that will have most influence in shaping workforce perceptions of management commitment, and it is how they interpret corporate directions and make day-to-day judgments on mine safety issues that will make the greatest impression “at the coalface”.

Workers expressed a strong preference for mine managers who adopted an open and communicative style of management and reported that it was an important component of building trust. We found that at higher OHS performing mines the mine manager usually sets a positive tone, often by creating opportunities for both informal and formal engagement, taking advantage of shift changes and the normal course of daily activities to engage directly with the workforce. In contrast, at one low OHS performing mine, for example, it is noted that senior mine management “disappears into their offices” whenever there is a change of shifts, while at another, a reclusive middle management appeared to be the problem. At the latter, the mine manager sought to overcome the problem by requiring new miners’ changing room sheds (referred to as “dongas”) to be built immediately adjacent to management offices, thereby making it virtually impossible for staff and workers to avoid each other.

We also found that at the best performing mines, management found a variety of ways to overcome worker suspicion, such as by being receptive and responding rapidly to safety concerns raised by the workforce. This meant demonstrating their commitment to workers (what elsewhere has been described as an “empathic style” where management does a great deal to help the individual worker solve the problems he or she encounters at work (Hasle and Møller 2007). Such a style has been strikingly lacking in the mining industry as a whole. One of the most important findings of Pitzer’s cultural survey of the mining industry was that:

the “value” of “Care about employees” that underpins the achievement of a positive safety culture seems lacking in the industry ... the pervasive message employees connect with is that management does not “value” employees (MCA 1999, 36).

Beyond issues of engagement, however, the most compelling demonstration of mine managers’ commitment to safety was almost universally regarded as being their willingness to halt production if safety is seriously compromised. This, workers widely reported was the clearest possible demonstration of their willingness to “walk the talk”. At high performing mines, managers appeared far more willing to “bite the bullet” on this issue, notwithstanding the difficulties involved. For example, one manager described how:

We were well into the production panel — [when a problem arose] — I stopped for 24 hours to fix it. I refused to put machinery down the pit if the situation is not satisfactory and if it’s a major issue — if it’s unsafe, that’s it. Full stop. We go down a framework approach. We have learnt to assess risks. If the risk is acceptable, we carry on. If you get the wrong answer (its unsafe) then too bad — you just stop work. That’s far better than spending the rest of your life walking down the street with someone pointing to you saying ‘that bloke killed my old man’.

In contrast, poor performing mines, both in safety and productivity, were the most reluctant to halt production. As one respondent stated:

Coal mining is basically production orientated. ... What I'm saying is that the focus of almost everyone at the pit is basically production. They don't see safety as being a large part of their job, it is something that's incidental.

And failures to put safety before production served to reinforce cynicism and mistrust on the part of the workforce, and can undermine almost all other management OHS initiatives.

Intriguingly, at some lower OHS performing mines, it was not just management that displayed a preference for production values over safety values: workers too adopted this attitude. At such mines it was not uncommon to find the crew focused exclusively on production, with workers saying they "just want to cut coal". As one worker stated:

[we are] basically production orientated. ... What I'm saying is that the focus of almost everyone at the pit is basically production. They don't see safety as being a large part of their job, it is something that's incidental.

Finally, given the importance of the personal relationship that good mine managers often manage to create with many members of the workforce (admittedly much more on the day shift than the night shift) mines that have a high turnover of mine managers inevitably face serious problems in terms of building trust. Yet some companies frequently rotate mine managers and other senior mine level positions between mines. This not only results in a loss of corporate memory at individual mines sites, but constrains the development of good working relationships between managers and workforce, and inhibits the building of trust. Our findings suggested the need to avoid repeated and rapid changes involving a number of senior mine management positions, except where a manager has demonstrably failed to build trust with the workforce and where relations between the manager and the workforce are beyond repair.

4.3 Overcoming middle management inertia

Even where both corporate and senior mine management have a demonstrable commitment to high levels of OHS, there remains a substantial impediment to their achievement if middle management below them, do not "buy" the safety message. That is, not only is visible corporate commitment crucial to maintaining trust, but the behaviour and actions of middle managers also plays a particularly important role (Cox and Flin 1998; Clark and Payne 1997). Here, trust may be lacking between one level of management and another (as distinct from mistrust between workers and management), and there may not just be a lack of trust in senior management's integrity but also in their capacity and competence to deliver on their OHS commitments.

In terms of integrity, middle management at a number of the worst performing mines viewed corporate intentions with deep suspicion. A key concern was that corporate attempts to devolve responsibility in conjunction with greater accountability, was just a senior management strategy to "protect their own arses", with the result that middle management would get the blame in the event of an accident. Such resentment sometimes morphed into active resistance, as the experience at one lower OHS performing mine illustrates:

We have a small core of managers who think [corporate OHS initiatives] are a load of crap and they've said so, this is all bullshit and when you get to the mine level, because they think it's all bullshit, they don't do anything until the last minute and then your attempts at being professional come to nothing.

A major concern was that corporate OHS initiatives, which middle management was responsible for implementing, imposed substantial paperwork and demands on their time without achieving substantive safety improvements. At one lower OHS performing mine, for example, these concerns tended to focus around the issue of electronic safety monitoring systems:

It has only been very partially implemented. It is not taken seriously by middle managers, with overdue action allowed to accumulate unimpeded. Some have a very cynical attitude towards it, in particular that it is a malicious attempt by management to control their behaviour. Others think it is just another extra burden that makes their job harder.

These findings are consistent with those of Pitzer, who in his cultural survey of the Australian mine industry found that the middle management group showed signs of “disillusionment” with corporate safety initiatives (MCA 1999).

Line managers, notably crew leaders, were particularly inclined to mistrust and resent more senior management. Although all mines struggled to some extent with deputies (deputy under-managers) meeting management OHS expectations – “the hardest job is getting the front line supervisor to do their safety job properly” – lower performing mines had the most difficulty in this regard. Deputies at lower performing mines were particularly inclined to feel let down by a lack of management support. As one put it:

We were told we were going to be made part of management and all the rest of the shit and we’ve always heard it that many times it ain’t funny. ... [but] it just sort of fell over.

Another commented “we’re sort of doing more of a managerial role with what we do, but then all of a sudden they’ll bring you back to earth and say you’re not doing this or not doing that and you’re only one of the blokes”. This can lead to questions by both management and workers as to where their loyalty truly lies:

The front line supervisor is the conduit between management and workers – is often seen by the workers as part of management, and seen by management as part of management, but are sometimes treated by managers as part of the workers. They run with the foxes and hunt with the hounds.

Irrespective of the precise source of middle/line management mistrust, the consequences can be highly detrimental to safety practices and performance. For example, middle managers openly admitted to not meeting their obligations to conduct behavioural based safety observations, or when they did, conducting them in a perfunctory manner, to audit recommendations being “left on the shelf”, to not following or referring to safety management systems, to delivering safety briefings where they are simply “going through the motions”, and to ignoring specific directives to engage in “safety actions” as provided by sophisticated electronic OHS monitoring systems. Such a “blockage” at middle management level is not confined to the mining industry and seems to be a common and substantial challenge to building trust across a range of organisations, particularly where line managers are distracted by their own accountability and the pressure to meet performance criteria (Jeffcott *et al* 2006, 1116).

Given the crucial role played by middle/line managers in the determining the success of company-wide OHS initiatives, maintaining their trust in both corporate management competence and commitment is crucial. But how is this likely to be achieved? Our fieldwork suggested the need for a mix of mutually supporting

approaches (no single approach alone is likely to be sufficient to overcome a deep-seated and long-lasting mistrust).

First, the highest performing mines made high quality training a high priority for middle management. And OHS is not treated only as a discrete training module; it is a core feature across the board. Training also needs to be scheduled as a regular ongoing activity, not just as an ad hoc intermittent event. In this regard, those mines operating on a rotating shift find it easier to schedule training, for example, as a monthly event that captures all employees – in contrast, as training often occurs during regular business hours, those on night shifts at fixed shift mines may miss out on training. A key part of any training program will be to ensure that middle managers have more than just adequate training in the operation of increasingly sophisticated OHS interactive databases – this is particularly true given the natural aversion to information technology of many middle managers.

Second, OHS must become a central feature of middle management duties, functions and responsibilities, and, crucially, recognised as such by senior management. The key objective in this regard is to ensure that safety management is not just as an “add on” to their “real” role. Rather, it provides a valuable avenue through which to achieve (and leverage) a broad range of management objectives (a key aspect here is the use of interactive OHS databases as a valuable management tool). It is vital that senior management review the performance of middle management accordingly, and, crucially, back middle management to make OHS decisions even where this may lead to a loss of production in the short term – a failure to do so will greatly undermine efforts to build trust, and will reinforce negative perceptions on the part of middle management that senior management is not really serious about safety.

Third, middle managers should be provided with adequate time and resources to devote to an ever-increasing workload generated by corporate OHS obligations (at present many feel swamped and are struggling to cope, for example, with “excessive” audit burdens). Again, a failure to do so risks reinforcing negative middle management perceptions about lack of senior and corporate genuineness. A key issue here is to avoid a “tick the boxes” approach to OHS duties which risks being seen as meaningless “numbers game”.

Fourth, corporate management should strive to provide consistency in the approach and direction of OHS initiatives and their consequent middle management obligations. Although continuous improvement is an essential component of modern safety management systems, it is particularly important to avoid seemingly capricious (and kneejerk) changes to standards and systems. Consistency of message and approach provides middle management with greater confidence that corporate management is in “for the long haul” and makes it less likely they will avoid committing to OHS initiatives by simply waiting for the next corporate management scheme or, indeed, change in senior management itself.

Fifth, line managers need to be clearly identified as being part of the management structure – too often they receive mixed messages and viewed as “part of the crew”. A clear management role of crew leaders can build trust with both superiors and subordinates. Crucially, however, this requires their senior and other middle managers to back them in the OHS decision-making. The role of line managers in elaborated on in more detail below.

4.4 Flatter structures, devolved decision-making, rotating shifts

The choice of organisational structure can have important consequences for trust at a mine, particularly in terms of workplace culture and the “us and them” divide. A majority of the higher OHS performing mines have adopted a flatter management structure that requires devolved decision-making. This arrangement is closely related to the above issue of middle management inertia since it has the effect of *removing* layers of middle management and bringing line management and workers in closer operational proximity to senior mine management.

A flatter management structure usually entails the creation of three discrete mining processes, development, production and supply/support (“outbye”). Each process is overseen by a single coordinator per shift, usually promoted from the ranks of line management. Above them sits a senior management supervisor for each discrete process. The net effect is the removal of an entire layer of middle management.

Where this structure had been introduced, there was widespread support for it amongst both management and workers. It was claimed that the less hierarchical structure had devolved decision making to the coordinator and crews, and this had in turn created greater trust between the coordinator/crews and management. It was also claimed that the “lines of communication” between line management and senior management were more open and efficient. Workers and line management saw less unnecessary interference by middle management in their day-to-day activities. In the mines where this had occurred it appeared that line managers placed in a process coordinator role had “risen to the occasion”, and that their traditional uncertainty as to whether they should behave as workers or management had been overcome: “I see myself as probably part of junior management The coordinator is basically running the whole show now”.

Senior management has given greater authority to crew leaders acting as coordinators, in effect expressing confidence (and trust) in their capacity to manage – a trust that is largely reciprocated. And when this arrangement has been in place for some time, workers, by and large, are enthusiastic supporters. From their perspective, “one of their own” has been put in charge of day-to-day operations. From the management side, there was also some support for a flatter structure because “the more levels of demarcation and hierarchy, the more individual workers can hide and buck pass”. Here our findings are consistent with the organisational trust literature which emphasises how overtly hierarchical relationships constrain trust. Those at the bottom of the hierarchy often have a “fear of exploitation and the nagging suspicion they are being treated unfairly”, while those at the top suspect “that those individuals for whom they are responsible are shirking when performing their duties or engaging in acts that might endanger the organization’s welfare” (Kramer 1996, 216).

The creation of discrete and distinct process teams resulted in workers having the opportunity to develop a stronger identity with their management team. At the mines where this occurred, there was usually (but not invariably) less of the traditional divide between workers and managers and greater potential to develop trust. This is consistent with Pitzer’s cultural survey of the Australian mining industry where he found that “mines that reported their preference for a “Team Performance” mix of safety strategies were also the mines where more positive safety cultures were measured” (MCA 1999). Certainly, in those mines that had not pursued flatter management structures, hostility and mistrust between management and workers was considerably more evident.

Another and related issue is that of rotating shifts. There are essentially two options for arranging shifts at coal mines: fixed and rotating shifts. The former involves

placing workers on a particular day, afternoon, night or weekend shift, and little scope for interchange. Under such “fixed shifts” unions have traditionally allocated “seniority” to workers based upon their length of service, and those with the highest level of seniority are able to get first preference for their preferred shift. In contrast, shifts may be structured so that workers are rotated through each shift over a fixed period of time. The implications for trust of choosing between fixed and rotating shifts are substantial. Rotating shifts render the concept and practice of shift seniority obsolete because all workers are treated equally, irrespective of when they started working at a mine.

It appears counter-intuitive to suggest that the removal of one of the most cherished conditions of the mining unions, namely, shift seniority, could lead to greater levels of trust and safety between workers and management. And yet, where this has occurred (in some of the highest performing mines), there are convincing signs that that this has indeed been the case. For example, shift seniority reinforces the possibility of an insular worker culture developing that is predisposed to antagonism and mistrust towards management and resistant to management safety initiatives (by clustering the older and usually least flexible workers in a single shift, namely the dayshift). Seniority can also limit the capacity of management to create more productive work teams, and successfully integrate new recruits. In contrast, the removal of seniority and the introduction of rotating shifts place all workers on an equal footing, reducing the risks of insularity and parochialism.

Another important distinction between rotating and fixed shifts is that, in the case of the latter, senior management (who work day shift hours) rarely has the opportunity to interact with the night and weekend shift workers (although they will see afternoon shift workers at the start of their shift). In contrast, under a rotating shift system, all workers get equal exposure to management, making it easier for management to maintain open communication links with the entire workforce and to build a rapport with new recruits. A further benefit of the introduction of rotating shifts is that makes it possible the rostering of safety training for all workers over a given shift cycle. When combined with worker ownership, that is, allowing workers substantive input to the type of training they receive, this can also improve levels of trust. Significantly, despite strong in-principal opposition from unions and workers, where the removal of shift seniority has occurred through the introduction of rotating shifts (usually combined with other management strategies to build trust) there is recognition amongst the workforce of its benefits for safety and productivity.

Notwithstanding potential resistance from trade unions during the transition period, management should consider the introduction of rotating shifts at more mines, in combination with a process-based organisational structure. Rotating shifts have a number of crucial benefits for improving trust, including regular training rosters *during normal shift time*, the effective removal of shift seniority and opportunities for mine management to interact with all workers at some point during a shift cycle. However, rotating shifts will not suit all workers and proposals for their introduction must be engaged in with sensitivity and conscious of industrial relations implications.

4.5 Ownership

We are not the first to argue that that ownership and trust are closely connected. For example, Conchie *et al* (2006, 1101) suggest that: “engaging employees in decision making not only increases trust in management ... but also promotes within employees the perceptions that they are trusted by management. In turn these perceptions increase the personal responsibility that employees take for safety and safe behaviour”. However, our own findings were particularly striking in this regard.

Workers seemed far more likely to “take on board” and implement OHS initiatives if they had a high degree of ownership of them. At high performing OHS mines this was usually achieved by engaging workers in the creation of these initiatives or, in the case of corporate initiatives, in how these policies were interpreted and adopted at individual mine sites. As one manager described it:

Fundamentally, the process is driven by the workforce — there is a high degree of ownership. We provide the resources but we want the workers to identify the safety improvements. They've got their own committee, with about two members from management, and the rest of the eight or so are workers.

In another higher performing OHS mine, the introduction of dedicated and relatively self-managed work teams in each shift had far reaching benefits for ownership and trust:

They have changed the roster so that they have consistent teams — services, longwall and development — and they have become more specialised, with greater ownership. The teams get better at their jobs, develop more specialised skills, the workers have more input into the work program and have a vested interest in the crew's success.

In a third mine, even an attempt by management to introduce a behaviour based safety initiative – usually resisted by the workforce because it is seen as a “blame the worker” approach – was adopted enthusiastically, primarily because a high status and influential group of miners were engaged at an early stage and came to feel that it was “their” initiative. Similarly, in a sister mine, workers were encouraged to address inefficiencies or other problems themselves. For example, safe work procedures were kept very simple in order to give production workers the authority and autonomy to “do things for themselves”. This represented a subtle shift in perceptions of ownership, but one with positive influence on worker trust. And, in perhaps the most striking example, a team representing a cross-section of operational and maintenance expertise, skills and responsibilities, persuaded company management to re-open a recently closed mine. Under a new enterprise agreement that gave them no permanency, but substantial incentives for increased production, they surprised even themselves with better production, quality and industrial relations. In particular, through their direct participation in and ownership of OHS processes, they achieved considerable improvements in safety procedures and in how they dealt with OHS challenges. One respondent was representative of a commonly held view when he said: “I was skeptical at first – we'd been let down [by management] before. But things started to come together ... our input into the safety agenda was a key part of that”.

In contrast, lower OHS performing mines often ignored the benefits of generating worker ownership. At one such mine, for example, workers complained they were not consulted before the introduction of a new management safety initiative that required them to complete a written “job safety analysis” card at the start of each shift, or new assignment. This not only undermined their trust in management, but effectively destroyed the credibility of the initiative: workers readily admitted that it had become common practice for them to take the cards home and fill them *in advance of the actual jobs*, for example, “while watching television” – a practice that clearly defeated the entire purpose of having the card system. In some cases they completed an entire week's, or even month's, worth of cards this way: “I fill out the books a month in advance”. Others simply “tick and flick” the cards with no thought about actual risks or safety mindfulness.

4.6 Communication

Another important and related factor in developing trust is communication. Certainly a distinctive factor of all high OHS performing mines was the high level of communication between workers and management on OHS issues. However, no single, successful formula for communication could be identified, and much depends on personal management style. For example, effective communication could include start of shift meetings with deputies, tool box talks, regular planning meetings with the management group and regular OHS committee meetings, as well as a simple “open door” policy and informal dialogue with mine management, such as after-work barbecues. Some claimed that “it is much easier to engage workers in small groups”, but however it was achieved, a common theme in mines with high levels of trust was the extent to which lines of communication were open and workers and managers were able to jointly engage with health and safety issues.

In contrast, most of the lower performing mines had a greater propensity to report a lack of communication as a major reason why safety programs fail to engage the workforce and disappoint in their results. At one mine, for example, there were complaints about the constant stream of new safety initiatives, accompanied by little or no prior consultation with the crew, while at another, miners were scathing about the lack of consultation in the introduction of mandatory mini-risk assessments for every shift.

This finding is consistent with research by Cox *et al* (2006, 1126) that found “that managers who are willing to share information signal to their employees that they can be trusted” (see also Clarke 1999; Firth 2004, 56-61). However, disentangling the relationship between communication and trust is difficult because good communication may be as much a consequence as a cause of trust, and is closely related to a number of other variables associated with high trust, such as a willingness to report “near misses” in a blame-free environment.

Better communication is also important in nurturing trust between management and on-site union representatives. This may be achieved, for example by providing information before decisions are enacted, by facilitating genuine consultation on all major OHS issues, and by conducting regular management/union meetings. Notwithstanding tension between trade unions and management (to which we return below) some high OHS performing mines have achieved good levels of communication by working with and through the local union representatives, and this approach has often served to dissipate mistrust between workers and management.

A key aspect of communication was management’s willingness to listen to and respond to workers’ OHS concerns and to be engaged in a genuine dialogue about them. Workers clearly appreciated managers who responded promptly when they expressed safety concerns, even when this was only to explain why they did not propose to take any further action on this occasion. At one mine, for example, it was claimed that: “we are very happy with the mine manager, [he is] not a bully, is always available, and not reluctant to go underground, asking what problems are you having”. This approach resonates with Reason’s arguments with regard to the importance of developing a “blame free” culture although this is more an indicator of the extent to which a broader culture of trust has already been developed than a component in the creation of such a culture (Reason 1997). Certainly it emphasises that management must be meticulous in responding to issues raised by workers and avoiding blame. Only in this way will a blame-free culture become self-reinforcing, as workers gain confidence about openly reporting errors.

A crucial component of communication across all mines was feedback from management to workers, particularly in the context of reporting on matters such as accidents, near misses, equipment damage, and hazard identification. Workers can quickly become disenchanted with the reporting process when they believe that their concerns are not being taken seriously, and/or are ignored. And it is difficult for them to ascertain the extent to which this is occurring in the absence of regular feedback. Yet at some low performing mines responses to reports are simply posted on a notice board, without any face-to-face feedback, and at others feedback is either absent, or *ad hoc* and periodic. In contrast, at higher performing mines, feedback on incident reporting is seen as a priority and provided directly to the individual worker who is the original source of the report. This occurs even where the action is no-action – workers do not object to a no-action decision provided they are kept informed in timely fashion, and a reasonable explanation is provided. Not coincidentally, this course of action also served to build trust in management motives and commitment to OHS.

5. Trade unions and trust

Of the mines in the present sample, there is some evidence of a greater degree of mistrust at some heavily unionised mines than at some mines where the union presence is subdued or non-existent (four versus three, respectively). This is not to say that mistrust between management and workers does not exist at the latter, but that it is not necessarily filtered through the prism of potentially poisonous union/company relations.

But this tentative finding may reflect only the particular history and culture of the mining industry and does *not* imply that trade union involvement in OHS is inherently counterproductive. That history has been characterised by conflict fuelled by a tension between safety and production and by management's sometimes failure to "walk the talk" when it comes to putting safety first, by the ruthless exploitation by both unions and management of their relative bargaining strength in different economic climates, and by union strictures on management's right to "hire and fire" (and with it, the vexed question of "management's right to manage"). Against this backdrop it is not hard to imagine how entrenched adversarialism might be detrimental to trust between trade unions and management at particular mine sites.

In contrast, in other contexts there is considerable evidence to suggest that trade unions have often made positive contributions to workplace relations. For example, Deery and Walsh (1999, 28) found that "team building, ad hoc committees, regular meetings between employers and management, joint consultative committees, suggestion schemes and grievance procedures [were] significantly more likely to be associated with workplaces that had stable or growing levels of unionization" (see also Deery *et al* 1999; Dedobbeleer *et al* 1990, 1102).

Yet while the nexus between industrial relations and OHS is a real one and the tensions between worker and management on OHS issues such as fatigue and hours of work is unlikely to go away (Nichols and Armstrong 1973; Berman 1978; Carson 1981), this does not preclude co-operation across a wide variety of workplace safety and health issues. Our interviews suggested that building trust, and maintaining a constructive dialogue between companies and unions, while sometimes difficult, was far from impossible. For example, one manager spoke of how:

You can get the cultures to come together — the companies, the unions and the inspectorate — with astounding results. Take air-born dust control — a tripartite

approach has eradicated dust lung diseases — yet in the USA they have \$1.5 billion unfunded liability. We got terrific cooperation on this at [the mine site] and solved the issue... If we fail the standard government test the District Checkie [trade union check inspector] is informed — they phone — what are you doing? We form a dust committee, measure the impact, get feedback from workers, post a notice of the outcomes of the committee, invite all parties to see the result — that process is never confrontational — the CFMEU District Checkie is a main player.

Another described how:

We have a pretty close relationship to the workforce, and we work closely with the union officials. It started before my time in 1992. We are a relatively new mine, but we struggled with the mining conditions — the common foe — the geology. Another factor is that it's a one union pit so all the supervisors up to deputy level are all CFMEU. So there's one line of communication and strong leadership of the unions locally which helps. The communication is a matter of routine. Every Wednesday we meet with union officials... Industrial relations and safety? We have no difficulty keeping them apart. The union does it, they push safety.

And at some mines, management spoke not only of how they had good support from the unions, but also of how the involvement of the union could improve OHS outcomes: “[u]nions do add value — they support accident investigations. Local check inspectors support the development of SWPs [safe work plans] Even Behaviour Based Safety can go well if it's supported by the workforce or the unions”. In contrast, at other mines, management has actively sought to marginalise union engagement, and views this as a means of improving dialogue with the workers without the filter of unions. Further, they see this as an important way to build trust with workers and improve safety performance and outcomes. The experience of two mines (within the same company), both higher OHS performing mines, illustrates the two divergent approaches.

At the first mine, following a closure (and redundancy of the existing workforce) and reopening, management chose to selectively recruit from the workforce it had previously made redundant, excluding those who were perceived to be “union troublemakers and hardliners”, and also bringing in a substantial number of new workers. This provided an opportunity both to create a new workplace culture and to weaken the role of trade unions. The second mine also went through a similar process in which a substantial proportion of the workforce was “let go” and “the heavily unionized industrial culture of the past [was] largely removed”.

Under a strategy of marginalisation, the first mine's management was encouraged to disengage with union officials to the extent possible, and at the same time attempt to win over the workforce through direct communication. The goal was to undermine the capacity of unions to influence management decisions, whilst building direct links between the workforce and management, and so doing, made the unions largely irrelevant. In this regard, safety was a key battleground. As the mine manger described it:

We have taken safety away from the union, and had no safety committee for over a year. If you give power to the workers, then unions become superfluous – it's hard for them to hit you on safety. It is a huge battle to win their hearts and minds – we are just starting down that road... Management at [mine B] has spent more time with the workers. Previously, management didn't get out of their offices, and let the unions take over. We need to squeeze them out.

In contrast, the second adopted a more inclusive and cordial relationship with the unions and made a point of engaging unions in consultation, even to the extent that this approach might draw the ire of corporate management:

Communication with the workforce is all-important. We got into trouble with [corporate] at one point because they thought we were letting the unions “manage the pits”. But it is not them running it – it is really just consulting with the unions. It is all about enforcing the EBA with their consultation. That way, they will respect your decisions.

Often, what distinguished mines in which management built trust with trade union officials on OHS issues, from those that did not was what the former did *not* do. In such mines, there was no attempt to shift from secure employment to the use of contingent workers, there were no radical interventions to remove “troublesome” workers, and there was no attempt to exclude the union from consultation and decision-making. In short, they did not adopt a policy of marginalisation.

The resistance of trade unions and their members to let go of secure employment is understandably deep seated. It is also no surprise that secure employment is associated with the presence of trust. Contract workers (and others whose employment is precarious) for example, are likely to feel less valued than for those in a stable employment relationship. Certainly research suggests that “commitment is higher among employees who believe they are being treated as resources to be developed rather than commodities to be bought and sold” (Gaertner and Nollen 1989, 987) And those who know that a “new” mine was born out of a brutal history that involved strategic closure and redundancies may also feel that workers are expendable and unvalued, while a failure to engage and consult with the trade unions may send similar signals. Only if employees perceive health and safety management practices to be motivated by genuine concern and respect are they likely to trust management sufficiently to commit to such practices (Barling and Hutchinson 2000, 77).

So we are at a period where, notwithstanding a history of conflict and bitter animosity, a more constructive relationship may be emerging, at least at some mines. Although there are many mines at which the old animosities and attitudes have remained intact, at a minority, mine management has developed constructive relationships with trade unions at local level and has used them as a vehicle for improving OHS. The sorts of mechanisms for building trust described above, many of which could be channelled directly through the vehicle of trade unions, would serve to build this relationship further.

Beyond this, and at the level of the mine site, what is required is a substantial change in approach on the part of both protagonists. As one check inspector pointed out:

The company has to stop seeing the unions as the monster and attacking it at will, and we have to say, without the company, there are no jobs, no money. We need to cross over but the ideologies of company executives and our executives to a degree need to be reshaped.

It will also be necessary to develop relationships of trust between senior levels of the trade union movement and senior management. For “just as the CEO and senior management of a company are prime influencers in setting the tone of a company’s commitment to safety, so union leadership must make very clear the expected approach to safety issues to be taken by union members and officials”. This should be easier than it sounds. Leading companies are now committed to high standards of OHS and to going beyond compliance. And trade unions, in a period of particular

weakness in which their capacity to demonstrate their relevance on a variety of traditional industrial relations issues is limited, might well see particular benefits in promoting OHS (Barry and Loudoun 2006).

What is needed is a rational debate about how an improved and mutually beneficial relationship with regards to OHS might best be developed. Such a debate cannot take place until both sides let go of rhetoric, posturing and misrepresentation in favour of genuine efforts to improve trust in the interests of reducing the toll of work related injury and death.

6. Conclusion

There is growing evidence that the effectiveness of many management tools, including OHS management systems, is heavily dependent upon the culture into which they are received and that, in this respect, the presence of mistrust has a particularly potent capacity to undermine them. Indeed in many circumstances, building trust is essential to the effectiveness of OHS management initiatives. Accordingly, it is important to explore the ways in which mining companies and mine sites can best build trust.

Although the sample of mines on which this analysis is based is too small to be conclusive, at the very least it suggests that a variety of strategies are closely connected to the establishment of trust and that management ignores these strategies at their peril. While the mining sector may well be at close to one pole of the trust-mistrust continuum, many of the findings may be capable of generalisation to other industries, particularly those confronting similar adversarial workplace relations.

Some mines in our sample had been able to build a virtuous cycle of trust with positive ramifications for OHS practices and performance, while others, manifestly had not. Our fieldwork suggested that mines that had achieved high OHS outcomes had all or most of a cluster of characteristics that distinguished them from low OHS performing mines and that these characteristics, which had benefits in their own right, were also closely associated with the presence of trust. These include corporate and mine site leadership, the capacity to overcome middle management inertia, flatter structures, devolved decision-making and rotating shifts, worker “buy in” and effective communication, consultation and feedback.

Some factors appear to be so fundamental that it is difficult to conceive of trust developing in their absence. This is certainly the case with senior management and mine management commitment, and with getting middle management “on board”. But while these may be necessary conditions for the creation of trust, they are insufficient in themselves. After all, as was commonly pointed out: “managers come and go but we’ll still be here”. Without effective worker engagement, trust between workers and managers clearly cannot be achieved. Accordingly, the other criteria described above all form an important part of the composite picture. Certainly building trust is a multi-faceted enterprise and many of the aspects of trust identified above are mutually reinforcing.

It is likely, then, that trust can only be successfully built (and maintained) between the range of stakeholders in the mining sector, including corporate management, senior mine management, middle management, line management, workers and unions, when a range of factors are present and acting in a complementary fashion. While there is no single formula guaranteed to provide trust, it is clear that trust is unlikely

to be nurtured unless close attention is paid to a substantial number of the variables discussed in this working paper.

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