Using CCTV footage as a communication training and safety resource

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Abstract

This paper is based in the experience of an in-depth industrial ethnography with an Australian public transport organisation. The ethnographer began by undertaking the 12-week transit officer training program and moved into a behind-the-scenes role watching CCTV footage of their duties and activities for a further 4 weeks before the organisation allowed her to go 'on the tracks'. Once full participation alongside the transit officer workforce had been agreed, the ethnographer spent four months rostered into a late night work schedule alongside her research participants. This in-the-role experience was augmented by 41 in-depth semi-structured interviews. It was followed up with a research trip to investigate best practice in public transport security procedures and training in Australia and overseas (principally the UK, USA and Canada). The paper recommends using CCTV footage of incidents on the line as an important component of authentic, work-based learning and touches upon the culture change required to deploy these resources.

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Introduction

Communication is essential to the development of an active safety culture where an organisation and its employees work to minimise risk and the experience of harm. In such organisations it is important that people communicate about near-miss incidents and examine and learn from accidents and other events that might result in injury. Ideally, the organisation and its workforce agree that all parties are the beneficiaries of workplace safety and everything possible should be done to support openness.

> Where a reported occurrence indicated an unpremeditated or inadvertent lapse by an employee, the CAA would expect the employer in question to act responsibly, to share the view that free and full reporting is the primary aim, and ensure that every effort should be made to avoid action that may inhibit reporting. The CAA will, accordingly, make it known to employers that, except to the extent that action is needed in order to ensure safety, and except in such flagrant circumstances as are [specified, example below ...], it expects them to refrain from disciplinary or punitive action which might inhibit their staff from duly reporting incidents of which they may have knowledge. (Statement by the Chief Executive Officer, UK Civil Aviation Authority: UK CAA 2011, p. 1)

Airlines are globally respected as the industry which has achieved the most in creating a safe operating environment: 'it is now safer to fly in a commercial airliner than to drive a car or even walk across a busy New York city street' (Raheja 2010, p. 219). Despite the precariousness of the

enterprise, where hundreds of people are suspended miles in the air through the skills of engineers, pilots and a fleet of ancillary staff, accidents rarely happen. This is no accident. The airline industry has spent decades exploring ways in which its practices and processes can be made more safe, and have developed the concept of a 'just culture' as a major driver of the behaviours that build true safety (Reason, 1997; Dekker, 2007). Central to the operation of a just culture is an acceptance that people make honest errors and some mistakes, and rarely intend deliberate harm. A just culture moves beyond no blame, however, since there is a clear understanding of the circumstances where people will be found at fault. Even then, fault will be mitigated where there is due-reporting and full co-operation with an investigation:

> No blame will be apportioned to individuals following their reporting of mishaps, operational incidents or other risk exposures, including those where they themselves may have committed breaches of standard operating procedures. The only exceptions to this general policy of no blame apportionment relate to the following serious failure of staff members to act responsibly, thereby creating or worsening risk exposures.

> Premeditated or international [sic: intentional] acts of violence against people or damage to equipment/property

> Actions or decisions involving a reckless disregard toward the safety of our customers, our fellow employees or significant harm to the company or

> Failure to report safety incidents or risk exposures as required by standard operating procedures and/or this policy

> Staff who act irresponsibly in one of these ways remain exposed to disciplinary action. A staff member's compliance with reporting requirements will be a factor to be weighed in the company's decision-making in such circumstances. Outside these specific and rarely invoked exceptions, staff members who make honest mistakes and misjudgement will not incur blame – provided they report such incidents in a proper fashion. (Disciplinary policy used by an international airline, cited in Global Aviation Information Network (GAIN) 2004, p. 42)

The benefits of an open reporting environment are predicated upon sharing stories of what may go wrong and what might have been done differently to avoid negative outcomes. This paper argues that one key resource in this endeavour is the use, where it is available, of CCTV (closed circuit television) footage of actual incidents as a tool for staff development, role training and new employee induction. While this might appear self-evident, it seems that comparatively few organisations with access to CCTV of their operational workforce use this resource in a positive way. Indeed, many Australian jurisdictions construct the use of such tapes to be an infringement of workers' rights. For example, the New South Wales Department of Industrial Relations has issued a three-page *Code of practice for the use of overt video surveillance in the workplace*, which includes the injunction that access to video tapes should be restricted:

> Access to video tapes by persons other than those whose actions are recorded on those tapes should be restricted to individuals who are nominated personnel on the security staff and/or individuals in senior management. These individuals should only use the tapes for the original purpose of the surveillance operation. (Privacy NSW n.d.)

Potentially, there is a conflict here between the requirements of privacy and the practices most likely to promote safety. The discussion around these issues will progress far more positively in workplaces characterised by a just culture, and where the organisation clearly uses the information obtained to improve the ways in which it learns from past events and prevents mistakes from reoccurring.

Research Methodology

The primary methodological approach to this research into the contribution of a positive communication culture to transit officer safety was via an extended period of participant/observer ethnographic fieldwork (Agar, 1980; Denzin, 1987; Jorgensen, 1989) on the part of Christine Teague. Working directly with employees provides an understanding of the complex relationship in organisations between work practices, worker and organisations (Bechky, 2006; Contu and Willmott, 2006; Orr, 2006). As a result, Teague felt that to fully understand the transit officer culture and communication practices she needed to work alongside them and become part of that culture, rather than view their work from afar.

The option of 'watching' the transit officers at work was a possibility, however, as a result of the extensive use of CCTV in the organisation. Walby (2005, p. 191) believes CCTV video images are 'a form of text which is central to the coordination of peoples' activities' and 'subsequently plays a role in reproducing social relations', while Hindmarsh and Heath (2000, p. 525) refer to CCTV cameras as 'objects' which 'provide personnel with the ability to identify and discuss problems. Indeed, they often form the focus of collaboration and provide resources through which problems are managed'. Even so, many other researchers recognise the benefits of participant observation in qualitative research (Bechky, 2006; Contu and Willmott, 2006; Orr, 2006).

The organisation permitted the ethnographer to take part in the three months' transit officer training and induction but was reluctant to approve night-time duties on the track, which is where and when the transit officer workforce is at greatest risk of injury. Instead, they asked her to spend a month working in the monitoring room, which is where the shift commander uses the CCTV feeds from across the railway system to maintain safety and the effective operation of the rail network. During the ethnographer's time in the control room she was able to take copious notes, and ask questions. The data collection was restricted to observing what was occurring on the screens, however, and there was no verbal interaction with the transit officers, or the possibility of hearing what they said to each other since the CCTV feeds were mute. The ethnographer was also uncomfortable that the research might appear to be covert, as the transit officers would be unaware that they were being watched by a stranger. Further, she was keen to observe what occurred off camera.

If the organisation had expected that exposure to the CCTV coverage of night time events would have deterred the ethnographer from researching transit officer communication cultures in person, they were mistaken. Eventually they approved the ethnographer's request to be rostered alongside the transit officers and observe them at their work. This revealed nuances and insights which had not previously been accessible. For example, from the perspective of the CCTV control room, it appeared that a consistent culture prevailed throughout the transit officer cadre; however, once the ethnographer was working on the tracks she learnt there were significant differences in the culture on the different lines.

In addition to the ethnographic work, Teague interviewed forty-one people, from the officers themselves through to senior managers. Interviews were recorded and fully transcribed to provide a full-text database which was then analysed to uncover recurring themes and perspectives, as well as to identify illuminating 'outlier' comments. She also travelled interstate and overseas to investigate best practice in other rail organisations that had managed to reduce their injury rates through changes in their workplace culture. The research was conducted and funded as part of an ARC Linkage project but the partner organisation has since withdrawn from the research.

Literature Review

A just culture

The concept of a just culture has been developed over the past decade in response to the 1990s idea that a 'no blame' or 'blame-free' culture is the best environment in which to gather information that can help prevent error and accident. Noting that 'the "no-blame" concept had two serious weaknesses,' Reason (in his forward to GAIN 2004, p. vi) identified the first of these as a failure to confront 'individuals who wilfully (and often repeatedly) engaged in dangerous behaviours that most observers would recognise as being likely to increase the risk of a bad outcome'. The second weakness arose from a failure to 'address the crucial business of distinguishing between culpable and non-culpable unsafe acts.' (Reason in GAIN 2004, p. vi). The introduction of a just culture addresses these short-comings since people involved accept that there is justice in adjudicating between 'honest errors' 'the kinds of slips, lapses and mistakes that even the best people can make' and unacceptable behaviour:

> The general indications are that only around 10 per cent of actions contributing to bad events are judged as culpable. In principle, at least, this means that the large majority of unsafe acts can be reported without fear of sanction. Once this crucial trust has been established, the organisation begins to have a reporting culture, something that provides the system with an accessible memory, which, in turn, is the essential underpinning to a learning culture. (Reason, foreword to GAIN 2004, p. vi)

Reason's invitation to write the foreword to the GAIN report, *A roadmap to a just culture: Enhancing the safety environment* (GAIN 2004) arose from his earlier writings into what constitutes a safety culture. In *Managing the risks of organisational accidents* (1997), Reason identified that a functioning safety culture was also a: just culture; a reporting culture; an informed culture; a learning culture, and a flexible culture (Reason, cited in GAIN 2004, p. 4). In this context a just culture is defined as being characterised by 'An atmosphere of trust in which people are encouraged (even rewarded) for providing essential safety-related information, but in which they are also clear about where the line must be drawn between acceptable and unacceptable behaviour' (GAIN 2004, p. 4). This approach requires both the individuals concerned, and the organisations for which they work, to identify and investigate challenges to safety and respond to these appropriately in a way that promotes trust.

The learning organisation

An organisation that has a strong learning culture is characterised by that organisation's ability and willingness to learn from their employees' experiences and from past incidents. It captures all relevant information, analyses the data, processes information, then uses the lessons learnt to improve the organisation's safety system (Australian Standard AS 4292.1, 2006; Macrae, 2009; Reason, 1997). However, in order for an organisation to capture all relevant information successfully there is a degree of trust required between people working at all levels within an organisation. A lack of communication has been associated with a lack of trust in organisations, leading to failed safety initiatives (Fleming and Lardner, 2001). As Conchie and Donald argue (2008, pp. 100 - 101) 'In environments where safety is critical, it is important that workers feel confident that others are acting in a safe way'. They also believe that employees need to maintain a sense of wariness and also maintain personal responsibility for their own safety. An organisation-wide conversation around all aspects of safe practice is required to achieve this.

Authentic learning environments

Over the past twenty years there has been an increasing emphasis in educational theory upon 'learning', rather than 'teaching' (eg Bates, 1995). Furthermore, it is increasingly seen as important that learning is relevant to 'real world' situations, and that it develops skills that are useful in real life contexts (Harper and Hedberg, 1997). This has meant that organisations, but especially learning organisations, seek ways in which to support learning through delivering educational and instructional materials using contexts and scenarios that learners recognise as authentic, relevant to 'real life' situations, and which foster skills that are useful in real life contexts (Harper and Hedberg, 1997). Lebow and Wagner identify real life situations as being characterised by:

- Ill formulated problems and ill structured conditions;
- Problems embedded in specific and meaningful contexts;
- Problems which have depth, complexity and duration;
- Cooperative relations and shared consequences;
- A perception that the problem is 'real' and worth solving (Lebow and Wagner, 1994, cited in Standen and Herrington, 1997, p. 569).

Tam (2009, p. 72) argues for the need 'to embed learning into authentic and meaningful contexts [... where people] are required to engage actively in authentic problem-tackling or decision-making cases.' Learning from situations that have arisen in an employee's workplace, and been responded to by colleagues, forms a particularly engaging authentic environment.

'Best practice' communication

In a safety-critical environment such as a railway, communication is essential for the safe operation of the rail system. The importance of communication has been highlighted by previous rail accident investigations where communication was found to be a contributing factor to the events occurring (Hopkins, 2005). Further, communication is the important channel that links the transit officer with the railway environment and with the passengers that use the trains. Communicating with the public, working with transport users and instilling confidence that the transit officers are labouring to provide a safe railway environment was very much to the

forefront of the rail organisations identified as achieving world's 'best practice'. Bratton and Knobler (1998, p. 255) refer to their style of policing as 'the three P's – partnership, problem solving and prevention'. This was also found to be the approach of the interstate and overseas agencies visited by Teague. The best practice transit police shared information with other agencies, educated and worked with their communities to solve problems, and used analysis of incidents and crime to prevent reoccurrences.

From the definition of terms, and the related literature reviewed above, it is clear that communication is central to the challenge of improving transit officer safety. One way in which this could happen is to use the CCTV footage of critical incidents as a learning resource. During the time of the research, the organisation began to review footage of incidents with the individuals concerned. This was described as a one-on-one debrief, but the officers involved experienced these meetings as 'being called to account', and often felt them to be criticisms rather than a constructive discussion of alternatives.

Although it is important to review significant incidents, a one-on-one discussion with a supervisor falls far short of providing all potential benefits, and fails to emulate the models for best practice elsewhere. Given a just culture and a learning culture, the ideal would be to use the CCTV footage to power authentic learning across the relevant workforce without commenting on the 'person' of the transit officer involved in the CCTV sequence (whose appearance could be obscured). Instead, the video would be used to provide a prompt for discussion about the situation and the variety of ways in which it could be handled, addressing the options and choices available to transit officers in the course of their duties. The ethnographer's research with the transit officers demonstrated (Teague, forthcoming) that there is little communication between the lines of the rail transport system involved, and the good (and bad) habits that develop on each line stay on that line. A whole-of-organisation learning strategy, that develops good practice across the network, and finds ways to replace poor practice with better practice, is clearly superior to a fragmented and siloed communication culture in terms of building safety.

Case study

Suggestions for further research include looking, from a safety perspective, at the cultural or psychological aspects surrounding law enforcement officers making conscious choices against Directives, Policy, Procedure and Training.

> …In my role I continually see good officers making bad choices which affect their safety… As responsible managers we put directives and procedures in place to protect our people, and apply appropriate training, unfortunate[ly] officers continue to go against these provisions and make choices that jeopardise their safety (anonymous manager, personal communication, 2008).

Unfortunately for the effective working of a just culture, Teague's research indicated little trust between the transit officer cadre and management. Instead, a number of communication barriers were identified as potentially contributing to a lack of trust, leading to a culture within the organisation where learning is stifled. For example, transit officers are unwilling to report many issues for fear of being labelled as the problem, instead of feeling confident that the information will be used as part of a constructive step to improve safety. Even where incidents are reported, there is little confidence that they will be fully investigated and appropriate lessons drawn. Ideally, such lessons would inform future practice and the organisation's training regime

would respond flexibly to new information as it becomes available. The 'best practice' organisations visited during the comparative research interstate and overseas used such incidents as learning exercises. As Transit Officer Jack told the ethnographer, 'If the instructors got out and actually learnt what we did, and had some video evidence so that they can show the new people 'this is what can happen', the training would be improved.'

Teague found transit officers were unfamiliar with assessing the risks that may be inherent in dealing with an incident. This sometimes resulted in officers rushing in to deal with a situation instead of waiting until backup help arrived in order for a situation to be dealt with safely. As one of the more experienced transit officers told her:

> You get the young ones who rush into it like a bull at a gate. I try and speak to the young first and say, 'This is the way I operate. I want to have a nice safe night, yes sure we might deal with a bit of violent situations, but I want to have a nice safe night. I don't want you to get hurt and I don't want myself to get hurt. I just want to get home safely in one piece'. That's why I try to explain to them, 'Just take it easy. Just because you've got a uniform on, doesn't mean you're a Superman'. A lot of them think they are, they think they're super men. We're impregnable, we are. (Stan)

Or as another senior transit officer said:

> It's not so much going against the rules; it's just a real lack of judgment… virtually no common sense you know when they are engaging. Whether you've got seven males and they're just after one, everyone intoxicated, could be charged for a bit of agro. They'll just put the blinkers on and then go in and grab that one offender right in the middle of all his friends. That sort of thing… Nothing seems to switch on up here [touching head]. You know, that 'this could go really wrong'. (Moses)

Although the CCTV footage available to the rail transport organisation provides many examples of such situations, which could be used for ongoing training and professional development, the organisation did not take advantage of this material to instruct officers about alternative strategies that could be used to achieve safer outcomes. This wealth of CCTV footage of incidents that have occurred on the rail system and bus interchange areas could be incorporated into training packages available for access by transit officers, either through online self-paced skill development packages or in a class room mode of instruction. Positive and negative video footage of transit officer – passenger interactions with the public could be used as learning tools. Additionally, CCTV footage provides an excellent medium to highlight the importance of tactical positioning with regards to a transit officer and an offender, and the need to assess the environment for any physical obstruction that may be present and cause a possible hazard; or alternatively used as an aid. As one of the senior staff who had trained many years earlier as a 'special constable' told the ethnographer:

> It's repetitive training that has to be done with regards to things like proximity awareness. With regards to what is around you in the rail car [or] on the station that you can utilise to protect yourself. I mean, the centre pole in the middle of the doorway is one of the greatest tools I ever got taught to use to keep the distance between the baddie and myself. Just by dancing around the pole; moving around and keeping that pole between the two of us… It's not taught, but there's a lack of experience out there also. (James)

The ethnographer was impressed by the willingness of the 'best practice' agencies to share information; not only within their organisation, but additionally between organisations. There was a general attitude of cooperation in their endeavours to reduce crime and improve safety and security on transport systems. Analysis of all incidents was ongoing, and intelligence information was shared. For instance, the Massachusetts Bay Transport Area (MBTA) Transit Police have an Intelligence Department which collects and analyses information about transport incidents involving security, crime and safety in local, national and international contexts. The information is processed and presented in a weekly transit police bulletin – *The MBTA Transit Police Weekly Bulletin (the MBTA Bulletin)*. This document includes incidents that have occurred on their own transit system including suspicious events, unattended packages and the arrests that have taken place on each line. Also included are upcoming events in the Boston region during the next week; pictures and descriptions of any persons of interest that are wanted for questioning in connection with crimes committed on their system including the details and location of the alleged crime; and pictures of graffiti and the tags (an identifying signature mark left by the perpetrator or artist). These can all be shared with other organisations. *The MBTA Bulletin* is accompanied by a request that any other organisation experiencing equivalent challenges, for example, identifying similar tags, should contact the MBTA Transit Police Intelligence Department. The MBTA Transit Police are proud of the work their officers undertake and photographs of any of their officers being presented with achievement or commendation awards are also included in the *MBTA Bulletin*.

The *MBTA Bulletin* also reports upon the current risk of a terrorist attack on a U.S. mass transit system. In the past it has also included information such as 'Indicators of Preoperational Surveillance and Preparations for an Attack' and 'Suggested Protective Measures' from the Department of Homeland Security (MBTA, 2010a). The Department of Homeland Security regularly issues alerts and other information to federal, state, local and community government agencies; the private sector, and other entities; to inform and alert these agencies to lookout for possible terrorist activities (MBTA, 2010b). One of their latest concerns is the increasing sophistication of remote surveillance cameras and their links to the internet which allow terrorists to undertake surveillance from a distance (MBTA, 2010b). Details of any new type of weapon, or new disguise of a weapon that the transit police discover when dealing with alleged offenders, are also included in this weekly publication. This ensures that all transit police officers are aware of new developments amongst criminals and terrorists. Other information includes new technological developments related to transport or security such as the CCTV cameras recently being trialled at Logan Airport Boston, and at the port in Boston. These cameras enable remote panning and focussing into a particular area; or have the capacity to follow a person without losing any of the peripheral vision that would normally occur (Teague et al., 2010). All this information, along with any general news from the Department of Homeland Security, is provided to all transit police officers. Other interested transit police organisations and law enforcement personnel are also supplied with the *MBTA Bulletin* upon request. The MBTA Transit Police have provided the research team with a weekly copy of the *MBTA Bulletin* throughout the period since the ethnographer visited them at home base, and this has enabled Teague to keep up to date with the latest transit police security news from their area.

The cooperation between the transit police agencies in various jurisdictions extends to assisting another transit police force when there is a particular event requiring additional security. Such an event occurred not long before Teague arrived in the United States. This was the inauguration of

President Obama. The Washington Metropolitan Transit Police Department (MTPD) explained the planning that went into monitoring the security on the transit system during that time. Transit police from many other jurisdictions travelled to Washington to assist them on the day (Teague's personal notes). The previous year the MTPD also dealt with the Pope's visit to Washington. As Chief Taborn states in the organisation's annual report:

> In 2008, MTPD continued its commitment to excellence through increased partnership with over 40 Federal, state and local law enforcement agencies, as well as dozens of local fire and rescue agencies… In partnership with the Federal Transit Administration, the MTPD developed a model program for creating an emergency management division to consolidate all emergency planning, training and coordination activities within a single office. This model will be used by transit agencies around the nation to enhance their emergency preparedness, organisation and capabilities. (MTPD, 2009, p. 5)

Additional interaction between the transit police agencies occurs at conferences; where the latest research is discussed; the Chiefs of Transit Police meetings; interagency collaboration on crime and terrorism; joint security exercises run by the Homeland Department; and transit police officers meeting up at academy or college training courses (Teague's personal notes). In Canada, transit police also have the Canadian Police Knowledge Network (CPKN) where information is shared.

In all these best practice organisations, information is seen as a resource which can make a difference to safe practice on the line, and sharing such information is a priority. Typically, the information is shared using a range of communication channels in ways through which transit officers and their managers build a shared culture of trust, learning from past events to ensure that problems are addressed and not endlessly ignored or repeated.

Conclusion

Some public transport organisations in Australia have extensive CCTV records of safety-related incidents that could be used as authentic training materials to develop communication and understanding around safe work practices. Unfortunately, this positive use of resources is affected by two factors: perceptions that public use of a video tape featuring an individual officer (even if their appearance is obscured) could constitute an invasion of privacy and perhaps a breach of data protection regulations (ICO, n.d.); and the lack of a safety culture in which management and staff are confident that the other is working to the best of their ability to promote and achieve safety at all levels of the organisation.

Data protection regulations tend, as does the UK Code of Practice (ICO, 2008, p. 13), to balance responsibilities to individuals with benefits to the wider group: 'Any other requests for images should be approached with care, as a wide disclosure of these may be unfair to the individuals concerned. In some limited circumstances it may be appropriate to release images to a third party, where their needs outweigh those of the individuals whose images are recorded.' Where the 'third party' is the workforce of people who might well find themselves dealing with a similar challenge in analogous circumstances, it is certainly arguable that the weighing up of costs and benefits could indicate that third party disclosure is justifiable.

In terms of Bratton and Knobler's 'three Ps' of policing, 'partnership, problem solving and prevention' (1998, p. 255), it is clear that the partnership dynamic needs to start with discussions

between the workforce and the management, as a basis for subsequent partnership engagement with the public. For example, an organisation-wide discussion about an absolute commitment to individual officer's privacy, compared with the possible gains in safety of discussing CCTV footage in a wider context, might be a precursor to using video recordings of actual incidents as part of authentic learning experiences. The development of an inter-communicating safety culture, characterised by a just culture in the context of a learning organisation, may require a culture shift. Such a culture shift may be a necessary prerequisite if the organisation is to deal effectively with the injury rates of transit officers, perpetrators and bystanders involved in incidents and accidents.

CCTV footage can be an important component in problem-solving around the prevention of accidents, injuries and incidents in the future. Such footage can be used to train new staff and to prompt discussion with the existing workforce across all branches and lines of the organisation. This video record would be used with the aim of opening up communication within the workforce, involving managers, and engaging all parties involved in discussions concerning safety-first transit officer responses to challenging situations. Given that much CCTV footage includes the run up to an event, as well as the event itself, it also offers a powerful tool for addressing the prevention of dangerous behaviour, and for identifying positive communication strategies that might avoid injury and other unsafe outcomes.

This paper has used data from an ethnographic research project, involving eight months on the ground research with a transit officer workforce, to argue that CCTV footage could and should be used as a communication training and safety resource. It has suggested that this possibility relies upon the development of a strong safety culture in the organisation involved, characterised by a just culture within the context of a learning organisation. It argues that good and open communication between workforce, mangers and the wider public is central to the realisation of these ends.

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