The many languages of CCTV

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By Dr. Dave Brooks & Jeff Corkhill

Closed circuit television (CCTV) has become a common form of technology, infused within many parts of our life, such as public, private, social and work environments. Whether CCTV is used in the media in a voyeuristic mode for the production of Big Brother, in public transport to reduce assaults or in a public street surveillance system to improve safety, the technology is in essence the same. Over the last 20 years, there has been much discussion on CCTV effectiveness. This discussion, in particular from the UK, has been significant in its scope.

On the 19th of April 2011 a major security incident occurred at Sydney Airport, one that had a knock on effect felt right around the nation. This incident occurred after a power failure allowed a number of passengers to pass through a security screening point, without being effectively screened. In response, the airport was evacuated and all passengers re-screened. This event was described by airport management and the relevant Ministers as evidence of the effectiveness of the airport security function and processes. What does this mean in relation to the significant CCTV capacity deployed across the airport? Considered in the language of surveillance, this event represents a gross failure of CCTV, as why were those passengers not able to be identified, traced and their whereabouts accounted for? However, should this event be judged only in the language of surveillance?

What are the languages of CCTV and how do these languages influence our perceptions of and understanding of how CCTV is employed? Past discussion has not addressed the question of what people think CCTV may be? Importantly, what do people who employ or use CCTV think that it is? It is perhaps a question that commentators and researchers need to ask themselves, otherwise how do they know what we are really measuring?

The Language of CCTV

One approach to address this question of CCTV understanding is to consider the “language” of CCTV. The language of CCTV explores how and in what context we understand CCTV. For example, is CCTV used for security, is it to monitor people or make them safer? Through understanding the language, we can better understand the broad application and more importantly, begin to really understand the social views of CCTV. It is suggested that CCTV can be divided into five distinct languages (Fig. 1), from CCTV as a technology tool to CCTV for evidence.

CCTV as a Technology: CCTV first developed as a technology and as such, it will continue to evolve. The technological vocabulary of CCTV is assessed to be the dominant language group. This is the language of the manufacturers, the language of research and development, and is one that security consultants and the industry use, because of its simplistic application. We are not suggesting that CCTV is technically simple; rather, that the mechanics...
of putting a system together requires a technical approach. We recognise the technological influence when we hear or see words such as solutions, bit rates, bandwidth, pixels and costs. The current drive to develop standards, and train and licence CCTV technicians is somewhat limiting, as for the most part it is described and discussed in the technical language of CCTV. Such an approach has the potential to exclude those groups not familiar or fluent in this technical language. However, is CCTV just about its technological capability and do people consider CCTV from this perspective?

CCTV as Evidence: The value of CCTV as a source of evidence has been known for sometime; however, it was the role of CCTV in post event reconstruction that cemented its value as an evidence tool. The 2005 London subway bombings is an example of the power of this vocabulary. Governments around the world set in train significant expansion of CCTV capacity across the mass transit sector based on the successful gathering of evidence from the London system. Law enforcement exploitation and discourse of CCTV is in a large part due to potential access to evidence. Where evidence is the primary focus of CCTV discourse, we see or hear words such as conviction, apprehension, admissibility, image quality, storage, and retrieval.

CCTV as Deterrence: For many in the lay community the value of CCTV is often perceived to be its deterrent value. Many systems, in particular public space systems, are procured and promoted on this law enforcement or political mandate. Deterrence is the language of senior management in many organisations. It is also the language of choice for many political figures and a secondary language of law enforcement. Words common to the discourse of deterrence include; behaviour, safety, visibility, conviction, privacy and statistics. The discourse of deterrence is often used to persuade the wider community of the value of CCTV.

CCTV for Situational Awareness: Situational awareness is one area of the CCTV discourse that receives little attention outside of its operational community. The contextual application of CCTV for the provision of situational awareness is however one of the most effective applications. For example, CCTV can be used to provide situational awareness of traffic flow on the highway. It is used to manage complex operational processes across a wide range of sectors, such as manufacturing. A recent security example from Perth was CHOGM, where many CCTV systems from fixed to mobile assets were brought back to a Western Australian Police control room. The passage of dignitaries en-route between venues was monitored using CCTV, providing operational commanders with situational awareness. The discourse of situational awareness includes words such as control, visibility, safety, management and response.

CCTV as Surveillance: The surveillance function of CCTV is perhaps how most lay people understand the employment of CCTV, whether the surveillance is in the public arena (both public and pseudo-private) or on transport systems, just to name a few. The surveillance function is also the least understood function of CCTV by both the lay community and the wider CCTV community. The surveillance discourse tends to be dominated by words such as observation, active, operators, targets, tracking and privacy.

CCTV as a research language: Whilst not identified as a specific language group in the CCTV domain, CCTV is a focus of academic research. Research has focused on trying to measure the effectiveness of CCTV in reducing crime as a deterrence, to direct limited resources more efficiently or as an evidence tool. In addition, other researchers have measured the perception of CCTV, inasmuch as do people feel CCTV reduces crime, does it make people feel safer, etc. Successful research requires that those doing the research become aware of and fluent in the various languages of CCTV.

Can the Language direct CCTV effectiveness?

 Firstly, we need to consider an example of how a singular event may be framed in many ways depending on the language of the discourse. On the 19th of April 2010, convicted killer, Carl Williams died after being repeatedly bludgeoned with the metal stem of an exercise bike in the high security unit at Barwon prison. It was almost half an hour before the body was discovered by guards. This incident, when framed in the languages of surveillance, situational awareness or deterrence can only be described as a failure for CCTV; however, when framed in the language of evidence the role of CCTV becomes a success. Such an example demonstrates how the effectiveness of CCTV is measured is contextually specific. Moreover, there are significant implications on the deployment and employment of CCTV systems when various stakeholder groups are unaware of the fact that different languages are even being used.

As CCTV becomes more directed in its application, the more effective it becomes. For example, research (Welsh & Farrington, 2009) suggests that CCTV reduces crime by up to 51 percent in car parks and by 23 percent on public transport. In a recent Western Australian Auditor General’s Report, the Perth Transport Authority quoted a 50 percent reduction in assaults on trains (2011, October). These systems have clear objectives and are located in a more restricted environment. However, city and town centre systems
reduce crime by 7 percent, although this is not a significant reduction. Finally, public surveillance systems have no significant effect. Furthermore, from a deterrent aspect, unless an offender has been caught CCTV offers little deterrence (Gill & Lovelady, 2003), with no effect on non-emotive crime. It is interesting to see how the discourse relating to the effectiveness of CCTV is limited, generally focusing on the evidence language group and to some extent, the technology language groups.

Conclusion

This article has presented the language of CCTV, taking initial steps to increase the discourse in CCTV to better understand this technology beyond what traditionally research, operations or management approaches to CCTV have taken. It has been suggested that CCTV is considered in five distinct language groups, namely as a technology as a tool for evidence, for unsociable and criminal deterrence, to aid situational awareness and as a form of surveillance. Each of these language groups poses different views and understanding of CCTV, resulting in conflict in what is a difficult tool to apply. The benefit of articulating clear language groups will lead to a more informed design, application and management of CCTV system in all its operational applications.

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Jeff Cockill is a former military intelligence officer who after serving 20 years shifted to the resource sector and spent the next 10 years of his career focusing primarily on the security intelligence needs of the precious minerals industry. In 2007 Jeff entered academia and he now lectures in Intelligence and Security and is actively researching in the fields of intelligence analysis, CCTV surveillance and personnel vetting at Edith Cowan University in Perth. He is in the final stages of his PhD which is focused on the role of professional analyst in intelligence analysis and what characteristics separate a good person for training as an analyst. Jeff has held a number of security management roles in the resource sector and consults in the security and intelligence field. His previous consultancy work has included working with the UN and private companies primarily on issues related to intelligence and surveillance.