POLICING IN THE INFORMATION AGE: TECHNOLOGICAL ERRORS OF THE PAST IN PERSPECTIVE

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In his milestone novel *Nineteen Eighty Four*, George Orwell envisioned a future in which the state would use information technologies to indoctrinate the population and repress any deviant thinking. His apocalyptic forecast is a long way from becoming reality, although it sometimes look as if the media empires of this world have achieved what no government could dream of. Everyday, however, the legitimate coercive arm of the state adopts more information oriented technologies, driven by the belief that it will make its work more efficient. The police is not the only institution engaged in this race to embrace the new paradigm of the information age: in the Western world and some developing nations, societies are changing at a very fast pace under the pressure of a new technical revolution, the epicentre of which lies in the Silicon Valley. But where private companies and public administrations have used information technologies to rationalise their organisation in order to generate profits or savings, law enforcement agencies have claimed that they could use them to increase their crime fighting capacities and provide better services to the community, or in other words to affect complex sociopolitical phenomena. These claims have never been empirically and scientifically corroborated. On the contrary, in the light of past technological developments in policing, and with the help of a theoretical framework adapted from Gary Marx’s works, this paper will try to temper the enthusiasm of many and plead for a more balanced approach to the introduction of information technologies in police work. This is not the work of a crypto-luddite, although we still find more interesting documents in the library than on the internet, and neither should we doubt for one second the legitimate and good intentions of IT advocates. But there is certainly a need to warn them about the potential flaws of their arguments, drawing upon historical and sociological perspectives.

In our developments, we will briefly delineate the three technological waves which have swept police work during the past 50 years and the often ambiguous relationship that exist between innovation and policing. We will employ the technofallacy paradigm devised by the sociologist Gary Marx (1991) in order to show the theoretical limitations associated with the belief that any technology in general, and information technology in particular, can improve the effectiveness and efficiency of the police, more specifically with regards to its dealing with the public. We will contend that, in line with previous innovations, information technology will certainly further remove uniform police from social interactions with citizens.

**Changes in police work in the 20th century**

During the past 50 years, policing has embraced many technological innovations, shifting from a labor intensive to a capital intensive occupation. The term policing does not really need to be defined here, however, talking of technology in the police context without differentiating its multiple applications and its different degrees of penetration in a rather complex organisation would result only in confusion and a damaging lack of rigor. D. Nogala stressed the extreme diversity of technological demands from police organisations (1995: 195), proportional to their degree of specialisation, but also their financial means. His typology of police technologies provides a helpful tool in the identification of the main tasks concerned by the increased technification of police work (1995: 199).
1. Surveillance and detection technologies
   - CCTV
   - bugs
   - sensors and detectors
   - satellite scanning

2. Identification technologies
   - automated fingerprinting
   - biometrics
   - DNA
   - image recognition

3. Information processing technology
   - computers
   - databases
   - expert systems

4. Communication technologies
   - telephone
   - computer networks
   - alarm systems

5. Organisation and administrative technologies
   - control centres
   - HR software
   - office software

6. Intervention technologies
   - weapons
   - protection equipment
   - robots

7. mobility technologies
   - cars
   - helicopters
   - bicycles

Criminal investigations have always been the driving force behind the adoption by the police of cutting edge techniques and equipment, still uniform patrol work is certainly the area of policing upon which the introduction of new technologies has had the most dramatic effects.

From the 1920’s on, three major waves of innovations have re-shaped the manner police maintain the peace and the expectations the public places upon street police officers. The first major change resulted from the widespread mechanisation of the police, relegating foot patrol to a prehistoric and forgotten era, and cutting down response time to calls for assistance. It was achieved at the end of the 1930’s in the United States and the early 1970’s in Great Britain and Australia. In the wake of this first wave, the generalisation and the refinement of radio and telephone networks made “fire-brigade policing” (Bradley, Walker et al., 1986: 17) a reality, with control centers receiving an increasing number of telephone calls from the public and allocating jobs to cars by two way radio, the procedure having been lately rationalised by the arrival of Computer Aid Dispatch (CAD) systems. By the mid 1980’s, police services in post-industrialised countries were fully equipped with analog communication technologies, and preparing to enter the next stage: the information age.

Although computers have been used by police services for more than two decades to store information, their miniaturisation and the explosion of the internet have made possible the dematerialization of the police station. Mobile Data Terminals permit the retrieval of information from police databases, the writing of reports and the exchange of text messages from police cars. Files are updated from the field, sparing police officers unnecessary visits to the station. Predominantly used in North America and in Europe, MDT have made an apparition on Australian soil, especially in Queensland, where a Mobile Integrated Network Data Access (MINDA) system is operational since April 1996. In Western Australia and South Australia, the fitting of police vehicles with computers is on the drawing board. The fascination for American policing strategies and techniques fares well for the generalisation of such systems in Australia in the near future.
Similarly, websites maintained by police services around the world seek to associate the community more closely with police work by presenting crime prevention initiatives and tips targeted at vulnerable populations, notably young people and the elderly. They also allow virtual visitors to download forms and to access procedural information, hoping to cut down the number of visitors swamping stations and to free precious police work-time.

At each stage of the police technicisation movement, the rationale of enhanced effectiveness and efficiency was put forward to justify a new leap. Millions of dollars have been invested in car fleets, communication systems and computer networks without any conclusive measurement or evaluation of their impact on the delivery of a better service to the community. Concurrently, it appears that the effects of this technological arms race on police-public relations have been detrimental, and that this trend is unlikely to be reversed. This unreasoned belief in the rationalising power of technology upon police work rests on eight technofallacies (Marx and Corbett, 1991: 402), which can be verified both in the historical and present contexts. These fallacies are:

1) The fallacy of explicit agendas;
2) The fallacy of novelty;
3) The fallacy of surface plausibility;
4) The fallacy of the free lunch;
5) The fallacy of quantification;
6) The fallacy of ignoring the recent past;
7) The fallacy of technical neutrality;
8) The fallacy of the fail-safe system;

The fallacy of explicit agendas would have us believe that new technologies are introduced for their declared purpose. But behind the managerially-correct discourse of efficiency and effectiveness, lie more latent motivations. Technology has the presentational capacity to make law enforcement agencies that embrace it appear professional (Manning, 1997: 122). The scientific symbolism of technology is conferred on police bureaucracies, outweighing the objective reasons of its introduction. In the account of his years as Commissioner of the Metropolitan police, Sir Harold Scott recalls how the 999 system, precursor of the emergency numbers, started its operations in July 1937 and how he “seized every opportunity of publicising the (…) system” (Scott, 1954: 92). The public, but also political decision makers, are subjected to this intense propaganda effort.

Apart from a public relation agenda, new technologies serve also to quench the hierarchical thirst for more control over the lower ranks of the police organisation. The call-box, then the portable radio, transponders, and computerized reporting systems allowed supervisors to bring uniform police under closer scrutiny and to ensure better compliance with rules and expectations (Ericson and Haggerty, 1997: 395). Still, the reflexivity and imagination of police officers quickly produce resistance and evading strategies, which in turn cripple the overall application of the new strategy.

Moreover, in times of budget constraints, competing services of the police organization lobby the executive in order to see their technological demands prioritized, producing supporting arguments borrowed from the dialectic of the public good and increased productivity. All these hidden agendas made of contradictory and unstable goals undermine the implementation of new technologies in policing. Information technologies, with their limitless surveillance possibilities, are especially exposed to controversy in the law enforcement environment.
The fallacy of novelty usually helps to tone down the criticisms directed at technical innovations. On the contrary, it assumes that technical innovations are better because they are new, and that this characteristic alone suffice to make them superior to more traditional means. Policing is immersed in societies which never stop to develop, produce and market new technologies, at a faster pace. It is hard for police organizations to resist the pressure, especially in a shrinking world, where the technical advances of other police services are noteworthy items for globalized media empires. The informed masses are made aware of new equipment programs implemented at the other end of the world, and in this highly competitive media environment, it seems easier for a police commissioner to plead for increased budgets in order to bring the organization on par with progress made overseas, rather than to publicly advocate the efficiency of existing systems and the adaptation of more traditional arrangements to the local situation. The technological status quo is definitely gone out of fashion, and police services are not spared by this trend. Moreover, it is reinforced by the social construction of technology by those who mass-produce it (Manning, 1992: 390): car makers, then telecommunication companies and lately the computer industry, have actively promoted their products to all solvent buyers, formatting their selling arguments to the perceived needs of their clients. This commercially motivated construction of the need for new technologies is itself at the origin of another fallacy.

The fallacy of surface plausibility will primarily focus on commonsense and wishful thinking to justify the unconditional adoption of new technologies. Rigorous evaluations and rational debate are often sacrificed on the altar of the “quick fix” to old problems. W. Ross Jonhston reports that in the 1950’s, the Queensland Police Union became preoccupied by the slow replacement of the foot patrol by a handful of police cars to patrol the Brisbane area at night, questioning the improvement of service offered to the population (Johnston, 1992: 235). However, the defiant response of the Commissioner was to put more radio equipped patrol cars into operation. Since then, the trend to more cars, guided by more complex dispatch systems and downloading more information through MDTs has never relented, although the problems they were supposed to resolve are still as pressing as ever, and that increasing evidence suggests that it might have alienated operational police from society, or at least seriously altered an already faltering relationship. What was initially devised to improve police-public relations, by making police readily available to public needs, turned into an effective loss of contact (Ackroyd, Harper et al., 1992: 72).

The fallacy of the free lunch will underplay the side effects or “collateral costs” of the introduction of new technologies in policing. The typical example is certainly the hidden cost for police services and the community of mechanization. R. Haldane records the first fatality involving a police car in 1926 in Melbourne (1986: 140). Since, things have dramatically evolved. In 1998, a CJC research paper (Alley, 1998) confirmed previous findings made in Australia and in the United States: between 1992 and 1997, 13 persons were killed and 90 were injured in police pursuits in Queensland. During the same period, 3 persons were killed and 13 were injured in police firearms discharges, making police cars much more deadly than police weapons (Alley, 1998: 37). Similarly, the financial loss generated by police pursuits and urgent duty driving in NSW in 1989 amounted to $14 million (Alley, 1998: 8). Such dramatic consequences are not yet matched by the implementation of new technologies in operational policing, but the negative productivity that we experience every day at the mercy of our computers will also certainly have a cost for police institutions. A slow erosion in liberties and freedoms can also be expected (Grabosky, 1998: 5), as well as possibilities of misuse generated by an easier access to private information. It is indeed very rare to see these legitimate preoccupations considered by the techno-advocates, and when they are, polite rebuttals generally put an end to the debate.
The fallacy of quantification, rather than ignoring the offsetting losses of a technology, will push police organisations to aim their cost benefit analysis at the most easily measured variables. In other words, the important objectives are relinquished to give way to more evaluation-prone criteria. Typically, the rationale behind the introduction of modern telecommunication and dispatch systems, and the multiplication of motorised patrols was a reduction in the response time to calls for assistance. However, the factors chosen to evaluate the successes of the new technologies were more centred on the outputs generated than on the outcomes. The police bureaucracies, and the new-managerialism mantra they professed, were less interested in finding out the quality of service expected by the population than the number of calls an operator could handle per hour or the number of jobs a police car could attend per shift. It remains that the level of empathy and professionalism showed by police officers are much more valued by victims than the few minutes taken off the habitual response time thanks to a new multi-million dollar communication system. The latest developments in information technologies and the stagnation of community policing strategies suggest however that because of this fallacy, policing runs the risk of having the technological means determine the end it can achieve, rather than choosing to embrace only those technologies that can provide better results, in what will always remain a face-to-face, labour intensive occupation. The development of impersonal internet sites and the likes of Police Assistance Lines\(^1\) might save precious police resources for “real crime-fighting”, but the disappearance of routine encounters with the public and interactions limited to emergency or crisis situations has the potential to erode the people’s confidence in their police agencies.

The fallacy of technical neutrality negates the ethical and moral dimensions of new technologies, an especially controversial issue in the policing context. Just as the car and radio-telecommunications redefined police work, from a social technology to a physical technology, embarked information systems and the growing provision of services through the internet are set to alter the perceptions of society on which police officers rely heavily. There is no doubt that the advent of the car changed the territorial conceptualisation of the police officers’ environment. The knowledge of the streets, their intersections and connections, the places offering maximum (or minimum) visibility of the police car and the scenes of frequent traffic accidents were the components of a new geographical knowledge (Crank, 1998: 48), putting less emphasis on the intimate understanding of the people and their activities. Likewise, the possibility for the population to call the police at will, even for trivial incidents, and the reduction of processing time generated by dispatch systems made the quasi-immediate appearance of police officers at the scene of petty crimes a legitimate expectation. However, their helplessness to provide more than comfort and advice, sometimes tainted of cynicism, was the source of more frustration and disillusionment than satisfaction from the public. As for information technologies, Ericson has already reported how “the communications formats provide the means through which the police think, act, and justify their actions” (1997: 33). Of course, police knowledge will remain “contextual, substantive, detailed, concrete, temporally bounded and particularistic” to use Manning’s words (1992: 370), but there is a danger that it will be surrounded by assumptions and meanings forged by the risk profiling of particular populations. The diffusion of MDTs will make securities, careers and identities readily available to the fingertips, giving a new dimension to police-relevant categories (Reiner, 1992: 117) or to dictionary knowledge (Chan, 1997: 77). This reconstruction of reality through the prisms of databases supported by actuarial techniques might compel officers to rely less on their discretionary powers and yield more deterministic outcomes.

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\(^1\) A NSW Police Initiative which allows citizens to report burglaries and other property related offences on the phone and obtain an event number for insurance purposes, without any sort of other police intervention.
coming to terms with the uncertainty they encounter every day. The loop would be closed with the compliance of people to their virtual profile, by virtue of the limited number of options given to them by repressive institutions, hence fulfilling the techno-prophecies of the information age police.

*The fallacy of the fail-safe system* assumes the reliability of new technologies. Fuelled by the commercial propaganda of the technology developers, this fallacy does not resist long to the harsh test of reality. In 1929, cars were not thought the best suited tool to the extreme conditions of rural Queensland (Johnston, 1992: 235). In large cities, airwaves reverberate, leaving police cars in the blank and allowing access to confidential information to everyone equipped with a scanner. Switchboards seem to be able to deal with a finite number of calls before a recorded message politely asks the needy to hold the line. Computer systems have a tendency to crash at the most impractical of times, and because of the predominant role of engineers in their conception, lack the versatility and flexibility we should expect of them. But not all faults reside in the original design of the system. Police officers have learned to exploit the weaknesses of new technologies to their advantage, in order to reclaim a part of the autonomy that was taken away by their supervisory traits (Manning, 1992: 391; Ericson and Haggerty, 1997: 414). Moreover, bona fides errors at the hands of culturally charged individuals are unavoidable and should be accounted for. In that regard, technologies should not only be seen as transforming police work, but also as a product of this work, sometimes falling victim to its ideologies and traditions, and repeating the mistake of the past, with a new found efficiency.

Finally, *the fallacy of ignoring the recent past* fails to take into account the lessons learned during the introduction of new technologies that were set to revolutionise operational policing. Police cars and radio-communication systems have not made the problems of policing disappear, and it is doubtful that information technologies will do so. In fact, they even have the potential to reveal their true nature, as the example of the establishment of the first NSW Police Force computer system suggests. In 1969, the computerisation of crime records resulted in a considerable increase in reported crimes and a substantial drop of the clear-up rate, due simply to the fact that the system put an end to the “Paddy’s” book, a separate set of records constituted of cases unlikely to be resolved.

**Conclusion**

The previous technofallacies are not mutually exclusive and neither do they invoke the same levels of analysis. They support each other in a fragile equilibrium preserving the appearance of rationality. Of course, policing is not an isolated occupation, and as Western societies are heading towards a major informational shift, police managers are reluctant to be left behind. Moreover, the arrival of a new technological wave coincides with the claims to a professional status for police officers. In that perspective, information technology systems are perceived by a growing number as qualifying systems. But this function of technology does not prevent its under and inappropriate utilisation by the operational police (Ackroyd, 1993: 12). We do not suggest here that police should not adopt new technologies, or that some other sections of the police, such as crime investigators and analysts, do not greatly benefit from the utilisation of information technologies, but that circumspection and perceptiveness are desperately needed. Policing is a differentiated occupation, and so should be its use of technologies. Managers need to be aware of the implications of the decisions they make in that regard and certainly need to reassess the financial and social cost already paid. The renaissance of a community policing philosophy recognised the limitations of technology based policing, but the growing and unreflective reliance on information technologies suggests that the lesson has not been learned as yet.
References


