

# Information flows in the police organization; what is going on inside the machine?

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There are known knowns. There are things that we know. There are known unknowns. That is to say, there are things that we now know we don't know. But there are also unknown unknowns. There are things that we do not know we don't know.  
(Donald Rumsfeld, US Secretary of Defense, Feb. 12, 2002)

**Abstract:** Police organization has been re-aligned around the ideas and doctrines of 'intelligence-led policing' which assume a machine-like rationality. This paper offers a critique of these ideas. It critically analyses the flow of information inside the police organization. From a machine model point of view management formalization of information flows is both necessary and possible. In practice organization knowledge is subject to non-rational forces outside management control. Functional rationalization may not increase substantive rationality and make provoke its opposite. This leads situation where attempts to order unorganized insecurity coalesce in a system of organized insecurity. Contemplating the flows of information in the police organization helps us to understand the paradox that it is experienced as a juggernaut – even by those on the inside – while its forms of institutional thinking are very often decidedly un-machine-like.

**Key words:** machine model, intelligence, information, organization

## Introduction

The epistemological and ontological ruminations of Donald Rumsfeld quoted at the beginning of this essay have been rehearsed at least once before in consideration of the theory and practice of intelligence collection (Higgins, 2009). In that instance, it was used to ground an insider's perspective concerning the rationality of different models of the 'intelligence process'. A key feature of that discussion was the 'knowledge gaps' about 'emerging threats' – unknown unknowns and the attempt was to articulate a formal and rational way of identifying them. The focus of this article is rather different. It is a critique of the police 'information system'. Here the analysis focuses on the machine model of police organization and the machine thinking that such a model presupposes. Machine thinking is evident in most articulations of intelligence-led policing (ILP) which rely heavily on diagrams depicting the intelligence 'process' or 'cycle'. Not uncommonly there is an effort to make sense of the flows of intelligence and information inside the police organization by reference to 'cybernetic models' (Gill, 1998).

The prevalence of machine thinking with regard to police intelligence flows demands that all information become subject to formalized systems of information management. It suggests that the enforcement of standardized information formatting is necessary in order that ILP deliver on the promise to make policing fully efficient, effective and economical. Such a view is sociologically naïve since it neglects to understand Karl Mannheim's (1960) point that functional rationality brings with it substantive irrationality. In short, while from a machine model point of view complete formalization of information flows is both necessary and possible, in practice the flux of institutional knowledge inside an organization always remains subject to non-rational forces outside management control. Lacking recognition that an emphasis on functional rationalization by no means increases substantive rationality, and indeed more often the opposite is the case, can easily lead to a situation where attempts to order unorganized insecurity

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coalesce in a system of organized insecurity. In such a state, the police become authors of the very insecurity they purport to be working against, a condition that has been named the 'security-control paradox' (Bowling and Sheptycki, 2012). Contemplating the flows of information in the police organization helps us to understand the paradox that it is experienced as a juggernaut – even by those on the inside – while its forms of institutional thinking are very often decidedly un-machine-like.

Rumsfeld's musings are attractive to people in the ILP business not simply because his very name is a personification of life during wartime, but also because they seem to directly map on to the core elements of information gathering and processing. Beginning with the 'known knowns', "clarifying what is already known is a sensible starting point" (Higgins, 2009, p. 85), but "focusing solely on what is known is unwise because this would lead to self-fulfilling prophecy" (ibid. p. 85). Not only that, since police information gathering is inherently concerned with finding out details that are not already known, that is why it is often called investigation. It is therefore not surprising that "finding out more about gaps in knowledge that are recognized – 'known unknowns' is generally accepted as a core purpose of intelligence collection" (ibid., p. 85). These features of police intelligence work, sorting the known knowns and deciding how to fill in the gaps about the known unknowns are key to successful police reactive investigation. Managing the flows of information in reactive police investigation has become systematized. Police detectives have become very adept at distinguishing dis-information, mis-information and real information as well as sorting and assessing such in terms of legal claims to reliability and validity (Innes, 2003, pp. 127-132). In such instances the functional rationality of the police division of labour can serve to create the conditions of substantive rationality most of the time and even detective's intuitive 'hunches' can be understood partly as "decisions arrived at by the application of the tacit knowledge of policing, framed by the organizational structure" (p. 10). In other words, police craft is embedded in understandings of how the 'police machine' works. However, even in routine investigative work there remains a degree of uncertainty and the possibility of unknown factors that may come back to haunt those putting the case together, so another facet of police craft involves a degree of informalism that lies outside the workings of the machine in order to provide 'cover' and 'protect your back' in the event that something goes wrong (Chatterton, 1979, 1983, 1989; van Maanen, 1974; Manning, 1977; Manning and van Maanen, 1978; Muir, 1977; Punch, 1985; Westley, 1970; Wilson, 1968).

Additionally, the incentives to informalism in proactive police work are even greater. Proactive work is here understood to be when police work creates or cooperates with conditions of criminality in order to gather information concerning the organization of crime – the prime example being the so-called 'Mr. Big' investigations, where police allow (and even participate in) a certain degree of supposedly 'low level' offences in order to catch serious criminal leaders (Puddister and Riddell, 2012). So perennially managerial and citizen oversight efforts to impose machine-like regularity grow in the attempt to prevent malfeasance to seemingly little effect (den Boer, 2002; Manning, 1977, 1992, 2010; Marx, 1988; Fijnaut and Marx 1995). Proactive policing practice is fraught with moral hazard and the incentive to regulate the flow of information is strong, but the belief that machine model thinking can be fully superimposed on to the workings of police intelligence craft misses important lacuna where informalism thrives. In police work there are many unknown unknowns. In this situation, police agents struggle to create certainty, always with the feeling that the price for making a mistake can be very heavy. In a world where accurate knowledge is often in short supply, the impetus is to circumvent the formalities of rationalized police organizational practice, if not to create real certainty at least provide cover in the event something goes wrong.

Recognizing that the rationalization of unknown unknowns is impossible and that police management systems predicated on machine thinking inevitably result in restricted freedom, privacy invasion, discrimination, social exclusion and are self-defeating, it would be better for police agencies to rather prioritize value questions that are non-rational, for example concerning human rights, social well-being, psychological prosperity and communal solidarity (cf. Ericson, 2006).

## Contemporary Background

In recent years police agencies in North America and Europe have come to embrace the terminology of ‘intelligence-led policing’ (Ratcliffe, 2002, 2008, 2008b, 2009, 2013). Much excitement in professional policing circles has been generated around the potential for computer-aided management of police information flows and thereby of police activity (Mastrofski, 2005; 2007; Prox, 2007, 2012). The language of ILP has become the *sine qua non* of contemporary policing in many jurisdictions. According to a report published by the US Department of Justice (Peterson, 2005):

To implement intelligence-led policing, police organizations need to re-evaluate their current policies and protocols. Intelligence must be incorporated into the planning process ... Information sharing must become a policy, not an informal practice. (p. vii).

Subsequent to the beginning of the ‘war on terror’ the report advocated that the flow of intelligence and information be subsumed within a nation-wide ‘architecture’ of US policing. Simply put, a joined up police machine for the whole country was imagined. The report indicated, “effective intelligence operations can be applied equally well to terrorist threats and crimes in the community ... officers ‘on the beat’ are an excellent resource for gathering information on all kinds of potential threats” (p. vii), but the problem was one of lack of co-ordination, common polices and terminology for gathering, collating and exchanging relevant information across agencies and jurisdictional lines. In order to correct this problem,

fundamental changes are needed in the way information is gathered, assessed, and redistributed. Traditional, hierarchical intelligence functions need to be reexamined and replace with cooperative, fluid structures that can collect information and move intelligence to end users more quickly (ibid, p. vii)

Variants of this discourse can be found elsewhere in Anglo-American policing and beyond (eg. Aepli, 20011; Devreo, et al, 2012; Gill and Phythian, 2008; James, 2003, 2013; Prox and Griffiths, 2013). Alongside the concern to rationalize the process of intelligence and information flows is another set of worries about the economics of policing. While discussion about the economic rationalization of police organization is not new (eg. Manning, 1992; Stockdale, et al. 1999), in the contemporary period concerns about the cost of policing have reached something of a crescendo (eg. Boyd, et al, 2011; Griffiths, 2000; Home Affairs Select Committee, 2011; Leuprecht, 2014). Amidst increasing demands for police departments to demonstrate ‘value for money’, the development of ILP has been looked at as a means to create economic efficiencies. According to a report in *The Police Chief*, a magazine for professional law enforcement managers in the United States,

A force that uses intelligence to guide information-based operations can penetrate an adversary’s decision cycle and change outcomes, even in the face of a larger opposing force. This strategy underscores the idea that more is not necessarily better, a concept increasingly important today with growing budget pressures and limited resources (Beck and McCue, 2009).

Two things about current trends are noteworthy and both are in evidence in the above quote. One is the tendency to impose business logic onto policing, to extract ‘value for money’, that is obtain policing services at least cost. The second is the increasing militarization of policing (Kraska, 2001). The ILP trend is one more attempt to imagine a cybernetic and machine-like system of information flows in the police organization and it is significantly shaped by the economics and militarization of policing. As a result, the amplification of organized insecurity can be expected to grow in intensity.

## **The Machine Model in Policing**

Much of the literature advocating information sharing is based on modeling the architecture of information flows and it proceeds on a premise that police organization is merely a network of discrete building blocks – squads, units, task forces, divisions, and the like – potentially united by a common records management system, (RMS), computer-aided dispatch system (CAD), command and control system (Com-Con) and a centralized intelligence data-base. However, “there are many tasks that fall to the police, and while they may all be necessary on some level, they are not always in harmony” (Giacomantonio, 2015, p. 26). Police organizations can be distinguished along territorial and functional jurisdictional lines (Manning, 1977). In abstract terms, police organizations are made up of constituent units – that is, “an organizational subsection of officers and support personnel who work together both spatially and temporally” (Giacomantonio, 2015, p. 23). Police agencies are an amalgam of specialized and bounded units and are themselves organizationally bounded. Without identifiable boundaries, organizations cease to exist for analytic purposes and, for that matter, practical ones (ibid., p. 22). The machine model has its most clear expression in the organizational chart or organogram. The organogram is a diagram that shows the structure of an organization and the formal relationships between different people, units, and departments. They can be hierarchical, matrix-like or flat, but all of them depict formal organizational structure and all of them connote rather fixed and machine-like or cybernetic relations between units that make up a functional whole. Within the overall organization units need to “scout one context, coordinate with a second and be diplomatic toward a third” (ibid. p. 23), which makes the free flow of information between such units problematic at the outset. The unit structure of police organizations differ within and between agencies and units often display unique aspects, even if there is a certain commonality to the general operational unit structure observable across Anglo-American police services (Bayley, 1992; Ericson, 1981, 1982; Grimshaw and Jefferson, 1987, pp. 41-46). What the classic observational studies of policing reveal is that, different units and sections within police agencies may have every reason to work together and share information but “may be unable to consistently partner with one another for reasons of organizational idiosyncrasy” (Giacomantonio, 2015, p. 27). Clearly police organizations are complex.

A prevalent belief about police institutions, that rests on the image of them as rank-structured bureaucracies, is that commands or instructions issued by senior officers are carried out in machine-like fashion by subordinates in a ‘chain-of-command’. The origins of this way of thinking lie in the work of Fredrick Taylor (1911). In Taylor’s vision of scientific management, the mechanical imagery is very clear. Taylorism intended to enhance the efficiency of factory production and it is perhaps hardly surprising that it was infused with the image of machine-like regularity in the process of human labour. According to Taylorist thinking, the structure of work organization should be studied, broken down into simpler elements and taught to workers as a strict routine. Rationalization was to be extended all the way up the organizational structure to the dizzy heights of the ‘Thinking Department’. In the ‘machine organization’ all tasks are strictly supervised by specially trained supervisors and managers on the basis of formal controls and rules. Managerial control of worker’s behaviour is ensured through the employment of objective information about work operations and work performance. In Taylorism, the craft knowledge of workers – ‘rules of thumb’ – are deemed inefficient, but ‘rational scientific management’ and tight managerial control are possible due to the objectivity of measurement resulting in the co-ordination of the entire machine according to the laws of efficiency.

The machine metaphor envisaged organizational flows in terms of a rationalized structure. Formalizing the structure of any given institution means subjecting workers to the rigors of time-and-motion studies. The famous Hawthorne Studies, largely the brainchild of Elton Mayo and his protégé Fritz J. Roethlisberger at the Harvard Business School, generated a mountain of documents from hourly performance charts and interviews with thousands of employees and it represented a milestone in the scientific management of human organizations. It also gave to sociology the concept of the ‘Hawthorne effect’, a term which signals an awareness of ‘observer effect’ in the process of studying human behaviour.

Briefly put, the Hawthorne effect means that, depending on how participants interpret the situation the presence of observers will have effects independent of the variables under consideration in a given study. In other words, and following George Herbert Mead, people are complex symbol manipulating animals who interact on the basis of meanings that are often ambiguous and ought not to be taken for granted (Rock, 1979). Not a stranger to scientific method, Mead was a theorist concerned with the reflexivity of human consciousness and the ability of human beings to creatively adapt to situations, a viewpoint which is difficult to square with the assumptions of Taylorism. Taylor's machine metaphor conceives of humans only in terms of the needs of the organizational machine, a point of view that many, if not all, people are likely to resist. Social relations are not fixed and machine-like, but rather are open ended and dependent on interaction and interpretation by all the actors involved. Interaction is productive of common agreed understandings of 'what is the case'. The integration of individual humans into any organizational group are inevitably fluid and contingent on changing interpretations of situations which themselves may change. In the police organization, interpretation is held in place by what Peter K. Manning (2010) refers to as the police *métier* – a set of habits and assumptions focused on the trope of 'crime' that "envisions only the need to control, deter and punish the visible and known contestants" (p. 105-6).

Although it goes by a variety of names – the professional police model, paramilitary policing, and ILP to name a few – there is a continuing belief in the machine metaphor as an apt descriptor of the police organization. James Q. Wilson called it 'the bureaucracy problem' in *Varieties of Police Behavior* (1968). According to him that problem was the basic one of how senior command could get the front-line police worker to 'do the right thing' (pp. 2-3). As Wilson put it:

... the police department has the special property (shared with few other organizations) that within it discretion increases as one moves *down* the hierarchy. In many, if not most, large organizations, the lowest-ranking members perform the most routinized tasks and discretion over how those tasks are to be performed increases with rank: the foreman has more discretion than the worker, the supervisor more than the foreman, the manager more than the supervisor and so on ... the functions of the patrolman make the problem of administration (that is controlling discretion) more difficult.... (p. 7 & 9, emphasis in original).

Wilson's analysis focused on three different 'styles' of policing. According to him, the 'legalistic style' is based on standardized enforcement and is characteristic of large cities where the police department has a complex division-of-labour. With this style differences in the use of police discretion are viewed as a sign of unethical practice and police officers are supposed to mechanically enforce the law wherever it is in breach. The 'watchman style' is also typical in large heterogeneous communities with big police departments but it involves taking 'serious' crimes seriously and otherwise seeking informal means to maintain social order and the 'status quo'. The 'service style' is common in communities with significant collective efficacy and an ability to regulate their own social order. In this instance aims at keeping the community safe from outsiders who enter or pass through. These 'styles' provide an analytical grid by which to understand varieties of police behaviour and in his book Wilson wisely concludes that it is always difficult to mechanistically control officer discretion so one of the most important things is to ensure that officers 'know their neighborhood' the better to exercise that discretion.

In Police Studies, two different emphases emerge from machine model thinking (Friedrich, 1977, p. 90-96; Black, 1980). From a perspective outside the police organization there is a basic belief that legal prescriptions and the 'rule of law' dictate police action. Many people believe that changes to legal rules directly translate into changes in policing practice in a mechanical fashion. For example, many civilians seem to believe that when the Chief of Police issues an order, for example to end the practice of 'street checks', front-line officers will case to do so as night follows day. From the perspective of police insiders, machine-model thinking is reflected in the beliefs of some senior managers about the dictative power of internal policy, rules and regulations. With machine model thinking, 'police subculture' is something to

be managed and manipulated by police managers and is often a term denoting problematic ‘rank-and-file’ resistance to rational management decisions. The trouble is, the police organization is not a machine. Despite being premised on a rank-structured bureaucratic form, the machine model is not really an accurate ‘base-line’ for understanding police organization. As Wilson’s analysis of police ‘styles’ suggests, police organization is flexible, fluid, more ‘organic’. Capable of coming together into units, squads, or teams that *sometimes* behave with military precision, the organization is held together by both formal and informal rules, both rational and non-rational beliefs and it attains organizational coherence largely as a result of the police *métier* not machine rationality.<sup>2</sup>

In the 1990s the ‘network’ metaphor emerged as a popular one for describing organizations generally and was applied to understanding police organization, although in the literature on policing this idea was more often applied to the study of relations between different organizations, rather than within them (Sheptycki, 2000). Benoit Dupont (2001) provided an historical overview of the evolution of policing technology which drew attention to the ‘techno-fallacies’ inherent in a belief that machines (technologies) would fundamentally alter policing and its organization for the better. Quoting Marshall McLuhan’s and Bruce Powers’ book *The Global Village*, to wit: people are ‘creatures of their own machines’ (p. 34), Dupont examined the how different phases of police history were shaped by the technologies – especially communications and information technologies – of their times. He observed that “access to a telephone and the modernization of radio networks led to ‘fire-brigade policing’, where police drove from one incident to another ... [and] control centres received ever-increasing numbers of telephone calls from the public and allocated jobs to police cars by two-way radio (p. 37). By the end of the twentieth century policing organization had evolved yet further and Dupont noted that

... Although computers have been used by police services for more than two decades to store information, their miniaturisation combined with the explosion of the Internet have made possible the dematerialisation of the police station. Mobile Data Computers permit the retrieval of information from police databases and the lodging of reports from police cars, which can also exchange text messages with each other. Files can also be updated from the field, sparing police officers unnecessary return visits to their station (ibid. p. 37).

In the ‘information age’ the machine metaphor for police organization has mutated into the image of a computer network in certain respects. Nevertheless it retains aspects of the hierarchical structure envisaged by Taylorism. Whether networked or not, the police machine is for mass social control and, as such, is a “mass-produced service delivery system” which possesses and holds in reserve slack personnel resources that can be mobilized in the event of emergency (Manning, 1992, pp. 354-55). Dupont analyses a number of ‘techno-fallacies’ – including the ‘fallacy of quantification’ (p. 41-42) and the ‘fallacy of technical neutrality’ (p. 42-43) – suggesting, in part, that the maxims of ‘community policing’ and ‘problem oriented policing’ in the 1980s were a failed attempt to de-couple policing practice from the police *métier* in order to pragmatically reorient police craft around the everyday and mundane problems of social order maintenance. He concluded that

This is not to suggest that police should refrain from adopting new technologies ... but rather that circumspection and perceptiveness are needed when deciding whether or not certain innovations are likely to improve police work. 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 the regard and certainly need to reassess the financial and social cost already paid for it. The renaissance of a community policing

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<sup>2</sup> That may be why directives issued by Toronto Police Service senior command in 2014 to end the practice of ‘carding’ – ie. ‘street checks’ – was not entirely followed. See Patty Winsa, Improper police ‘carding’ continues in Jane-Finch area, survey finds, Toronto Star, Wed. Nov. 12, 2014 (accessed on Feb. 21, 2016): [http://www.thestar.com/news/crime/2014/11/12/improper\\_police\\_carding\\_continues\\_in\\_janefinch\\_area\\_survey\\_finds.html](http://www.thestar.com/news/crime/2014/11/12/improper_police_carding_continues_in_janefinch_area_survey_finds.html)

philosophy in the 1980s recognized the limitations of technology based policing and tried to remedy it, but it appears that it was only a pause. The growing and unreflective reliance on information technologies suggests that the lesson has not been learned as yet and that it is seen as an end rather than an aid (ibid. p. 44-45)

The metaphor of the networked police organization is another variation of the machine. Nowhere is this more evident than it has been with the rise of policing with Compstat (Weisburd et al, 2003). They observe that, despite the possibilities that computerization holds for problem solving, the Compstat model served ultimately to “maintain and reinforce the ‘bureaucratic’ or ‘paramilitary’ model of police organization (p. 422). They concluded that, “American police agencies have adopted Compstat enthusiastically more because of its promise of reinforcing the traditional hierarchical model of police organization than for its efforts to empower problem solving in police agencies” (p. 450).

The advent of Compstat policing and the rise of networked policing was concomitant with the rise of another trope in policing, that of ‘zero tolerance’. The theory of zero-tolerance is known well enough; that by focusing on ‘quality of life offences’ and ‘low level’ street disorder, and using strong, coercive police powers against them more serious types of disorder and crime will be prevented from occurring (Innes, 1999, p. 398). In order to ensure that front-line police personnel were active in policing low-level disorder, the new technologies of policing were put to use to enforce the machine-like application of the tools of criminal law enforcement regardless of what individual officers’ discretionary thinking might allow. The result – policing by numbers and the super-quantification of police work – was indeed more machine-like, paramilitary and bureaucratic because it fit well into the police *métier*. The results brought widespread illegitimacy to the police organization came to be increasingly experienced as an out-of-control juggernaut, especially in the United States where this trend was most intense (Hill and Beger, 2009; Kraska, 2001; Kraska, 2006, but see also Haggerty and Ericson, 1999; McCulloch, 2001; McCulloch and Sentas, 2006).

The continuing prevalence of the machine metaphor in police organization is predicated on a feeling that social order needs to be enforced by strong measures like scientific rationality, law enforcement and zero tolerance for deviation from scripted rules. To this has been added the concern to improve the flow of intelligence so as to lubricate the police machine. Organizationally speaking, this is practically difficult because police organization is predicated on maintaining certain internal organizational boundaries (Giacomantonio 2014, 2015) and informalism and non-rational behaviour remains. Increasingly, the contemporary police machine is imagined as a juggernaut capable of enforcing social order not only by force, but also by superior access to information and policing with intelligence. This view is mistaken. Not only are the currently imagined ends of policing impractical, so too are the means, since they have been limited to that of a militarized police machine. As Bordua (1967) concluded some time ago, the aim of policing should not be “statistically measurable efficiency but rather a more difficult to measure intelligence and responsible exercise of discretion” (p. 163; see also, Martin, 1995). Further understanding the management of information flows within the police organization and the way that this relates to policing practice is helpful in understanding why this kind of intelligent policing has been difficult to obtain.

### **Information flows in police organization**

Despite the, by now long standing, concern to improve the flows of intelligence and information within and across the police organization there remains the difficulty of “turning rhetoric into practice” (Ratcliffe, 2002). This is due in significant respects to the ill-fitting nature of the machine metaphor as a complete description of police organization. Critical consideration of the way information flows inside the police organization is warranted.

Police organizations are something of a palimpsest. That is their structures are over-written during the passage of time so that older models co-exist with more recent ones. According to Giacomantonio (2015, p. 21), police organizations are usually in a constant state of reform. While certain features, such as uniformed patrol and reactive investigation remain 'core functions', others may be added, subtracted or otherwise changed and even 'core functions' can be differently organized. Quoting Giacomantonio, "organizations retrench or grow, acquire new technologies, connect with new partners, cycle through priorities, remove old leaders and get new ones, redesign organizational charts and hierarchies, outsource or disregard certain tasks while expanding into novel spheres of activity" (p. 21) and otherwise are 'transformed' (see also Henry and Smith, 2007). Therefore, one point to stress with regard to the management of information flows in the police organization is that it is shaped in irrational ways due to ongoing historical transformations in information processes. Managing information flows is always an artful accomplishment and seldom a simple administrative maneuver.

For good organizational reasons then, managing the flow of information cannot be achieved through the lines indicated on an organizational chart. For example, 'hold-up squads' or 'robbery squads' are examples of specialist units established decades ago. Willie Sutton is the archetype (Bittner, 1974) and in the mid-twentieth century there were good reasons why a police departments' 'best and brightest' would be detailed to tackle this high-profile crime. However, in the contemporary period the average armed robber is more likely to be 'beggar bandit' than a glamorous gangster (Schultz, 2005). In the interim, many cities have formed 'drug squads', 'anti-gang units' and other special squads, which in practice 'hunt' on the same territory for much the same 'quarry' as the robbery squad. The development and centralization of the criminal intelligence function might be thought to harmonize information sharing among these various specialist units, but it has not. Instead, there is hoarding of information within specialist units as a means to 'buffer' and protect organizational turf (Giacomantonio, 2015). Information is shared outside of the small group only informally, strategically and parsimoniously (if at all) and this one important reason why police organization is not fully rational and machine-like in its functioning.

Another common factor affecting information flows in the police organization has to do with pervasive concerns about knowledge 'leaking' into the external environment. That is because police knowledge is inherently dangerous. Police work is, as Bittner (1970, pp. 6-8), pointed out a 'tainted occupation'. The taint partly "derives from the suspicion that those who do battle against evil cannot themselves live up fully to the ideals they presumably defend" p. 7) and partly because they have powers and secrets no one else shares. The taint of the police occupation produces a surplus of 'dirty data'. Since police are 'the fire it takes to fight fire' and in the natural course of their duties use coercion that may inflict harm, there is a strong incentive to control the flow of information. This requires co-operation, as illustrated by the multitude of examples of shift sergeants and other supervisory personnel colluding with front-line officers in the manufacture of formal accounts (eg. van Maanen, 1974, Manning, 1977, 1997; Muir, 1977; Westley, 1970). Often the safest way to communicate 'the dirt' is to do so informally and off the record and this is another reason why machine thinking inside the police organization cannot be completely formally rationalized. The need to 'provide cover' leads to concerns to prevent 'knowledge leak' which can undermine police operations and it is also a feature of police corruption (Punch, 2011, p. 157).

As a tainted occupation police work involves a myriad of difficult situations and the police *métier* is shaped by the ever present possibility of both 'in the job trouble' that emerges out of 'on the job trouble'; the latter is anything that compels police to undertake action to restore order or enforce the law and former refers to the possibilities for 'blow back' within the police bureaucracy in the event that "the wheel comes off" (Chatterton, 1979; 1983). This ensures that individual officers need always to 'cover their ass' and this often requires the co-operation of colleagues. "One reason for the oft-noted tendency of patrolmen to form cliques, factions and fraternal associations", J. Q. Wilson (1968) observed, is to "defend officers ... because the administrator, if he is a strong man, is 'out to get us' and, if he is a weak one, is 'giving way before outside pressure'" (p. 73). A protective strategy in adapting to the ever-present possibility of



being 'eaten by the machine' is therefore to keep formal informational flows tight and use informal ones to lubricate the exigencies of the job. Individual self-preservation provides a strong motive for informal communication that is inescapable although proponents of machine-model thinking might wish it otherwise.

The rise to prominence of 'proactive policing' presents difficulties of its own for machine thinking. As Maguire (2000) notes, proactive police work is shaped by a risk management logic where the uncertainty to be resolved is to establish where a set of actors engaged in criminal activities can be discovered in order to manipulate the situation so as to prevent such acts from occurring or, where that is not possible, arrest said persons after a criminal occurrence. According to Innes, (2003), detectives engage in information acquisition and the interpretation of its meaning in order to assemble it into a form of knowledge cognizable as either evidence or intelligence. Formally speaking, police knowledge is information that has been assessed as to its validity and reliability and can be attributed a factual status. Intelligence is that form of information used internally by the police organization to plot future actions, make decisions, etc. and it often takes form at stages prior to any specific investigation. Evidence is information that has been assembled as part of an investigation into a format suitable for use in the legal process. (p. 258). Police 'make sense' of information, they interpret it and in so doing select between possible alternative lines of action according to information available at any given moment. Further, decisions are intertwined with and dependent on taken by others in the police environment a situation Innes refers to as 'concatenated decision-making' (p. 270). All of these decisions take place under 'conditions of low visibility' (Goldstein, 1960). Proactive police work is enabled by "the use of a growing armoury of information-gathering, analytical and investigative tools and techniques, including undercover officers, tasked criminal informants, 'bugging' and visual surveillance devices, closed circuit television, financial tracking capabilities, and of course a vast range of computer facilities, packages, and databases, most of them rare or non-existent 20 years ago" (Maguire, 2000, p. 316; see also Maguire & John, 1995). Vast quantities of information (dirty data) effectively exists at a 'pre-investigative stage' in the intelligence process. Perhaps not surprisingly, the amount of information in police hands frequently "outstrips the organizational capacity to act upon it", consequently "an important form of action in intelligence-led policing systems is in fact no action" (Innes and Sheptycki, 2004, p. 13). Such decisions are not determined by principles of legality, but rather of economy, efficiency and efficacy. These low visibility decisions not to invoke the investigative process can possibly be contested and in any case, non-action calls into question the ability of the police machine to live up to its claim to ensure social order by impartial enforcement of the law. Since these decisions are based on 'dirty data' the tendency to secretiveness and a degree of informalism in these matters is great.

The intelligence-led policing paradigm is fundamentally about technical solutions to problems in police knowledge management and dissemination (Ratcliffe, 2008, 2008b). At a theoretical level, there are a variety of 'techno fallacies' affecting the structure and functioning of police work that have been named (Leman-Langlois, 2013; Marx and Corbett, 1991). Observers of police use of information technology reveal that the functionality of advanced information and communications technology in policing is more often assumed than demonstrated. Constant technological innovation creates the feeling of frenetic organizational change. When new, sophisticated technologies are acquired extensive, expensive and time consuming training is required. Constant software and hardware 'upgrades' mean this is an endless process (Aeppli, et al, 2011). In organizations which count on 'results' deficiencies in training encourage pragmatic solutions and 'work arounds', which often involve patterns of informal communication that circumvent formal ones. Observations in many Canadian police departments reveal structural disconnections embedded in the technological solutions formally intended to facilitate and rationalize police internal communications (Sanders and Hannem, 2012; Sanders and Henderson, 2013; Sanders et al, 2015). As Giacomantonio observes, officers "recognize the shortcoming of systematized information, which is one of the reasons they continue to prefer discussing files through personal connections" (2015, p. 127) Drawing on extensive empirical research in Australian police agencies, Hughes and Jackson

(2004) analyzed the influence of technical, social and structural factors on the effective use of information in policing. They emphasize that advanced information technologies and information systems – what they call the ‘infostructure’ – depend on human interpretation and knowledge – which they call the ‘infoculture’. According to them, knowledge resides in users, not in amassed collections of data and information (p. 66). Thus

... while information systems and information technologies have a role to play in knowledge management strategies, without human expert interpretation these systems are merely tools that harvest information rather than create knowledge ... [thus] knowledge creation will not result from investment in technology itself, but from additionally investment in specific people skills that can make best use of the information assisted by the technology (p. 67)

Empirical observation of technological innovations in police organizations repeatedly find that attempts to harmonize the information environment of an action oriented workplace culture does not Taylorize the police machine. Front-line officers are under constant pressure to produce ‘results’, as measured by formalized key performance indicators of success, and this provides ample motivation to engage in informal communications and practices if they help ‘get the job done’, or at least create the appearance of doing so.

### **Machine management and information flow**

As the above discussion suggests, the police organization is fraught with complexity and it does not, despite the formal rationality depicted by the organogram, exactly conform to the machine-like expectations of a rank-structured bureaucracy. Nevertheless, senior managers and mid-level managers do their best to try to make it so. The police *métier* provides the impetus for both informal and non-rational police practice and communications as well as for formal management and does much to shape the flow of information. Police organizations have long played the ‘numbers game’ and the production of police statistics is central to the manufacture of the façade of formal bureaucratic rationality. According to Young (1991, p. 255 & 256), in the police organization “the detection rate is of vital concern, and a succession of poor [statistical] returns in the monthly or quarterly detection figures can break an ambitious detective inspector ... [thus] a stream of ‘hard facts’ and objectified crime statistics are produced”. In Chatterton’s view police officers have a contradictory and complex attitude towards management ‘paperwork’ (1989). Routinely, police officers disparage paperwork at the same time they “treat it as important and use it to promote their own ends” (p. 107). The policing organization he studied still left considerable room for a *laissez faire* style in the management of information flows (p. 133). The tighter routines of target-setting, tasking and deployment now commonly exhibited in the ‘intelligence-led’ policing organization of the contemporary period had not yet been firmly embedded, although, as Weatheritt contemporaneously recorded, that organizational style was already being adopted (largely because of the twin effects of the logic of economic rationality and advances in police information technology (Weatheritt, 1986, p. 99-117).

Classic studies of police detective work suggest a somewhat *laissez faire* approach to managerial oversight of organizational practice involving the flow of information (Fijnaut and Marx, 1995; Hobbs, 1988; Skolnick, 1966; Marx, 1989). However, beginning sometime in the 1990s, with the advent of ‘intelligence-led policing’ this began to change and these processes were subjected to more rigorous internal managerial oversight (Ratcliffe, 2002). In the UK several governmental reports – *Helping with Enquires* (Audit Commission, 1993); *Detecting a Change* (Audit Commission: 1996); *Policing with Intelligence* (HMIC, 1997) and policy-oriented scholarship (Billingsley et al, 2000; Maguire and John, 1995) signaled this change. Critical analysis of these developments has tended to question the cost effectiveness of proactive police techniques and ring alarm bells about the erosion of police legitimacy (Dunnighan and Norris, 1999; Innes, 2000; Innes and Sheptycki, 2004). Other analyses pointed to

systemic organizational pathologies in police intelligence processes, suggesting that rational managerial oversight was incomplete and, itself, subject to substantive irrationality due to structural features of intelligence management (Sheptycki, 2003; 2004). Most observers agree that managerial oversight of proactive policing, including the pre-investigative stages, has increased substantially over the recent past, but many also question the degree to which this amounts to full democratic and managerial transparency (South, 2001, p. 77).

Managerial accountability is obviously a key determinate if these processes are not to slip into unethical behaviour (Clark, 2001; Williamson and Bagshaw, 2001) but the continuing difficulty is the need for secrecy given the perceived efficaciousness of undercover policing methods (Billingsley et al, p. 17). Managing the flow of 'human intelligence' at the pre-investigative stages of police work presents enormous organizational difficulties because of the inevitability of its low visibility (Gill et al, 2008; Gill and Phythian, 2013). Centralizing, formalizing and rationalizing the intelligence process has been continually confounded by such institutional facts. That is why efforts to codify ILP within the strictures of an over-arching 'intelligence model' have fallen short of the mark (James, 2003; 2013). To cite one hypothetical example, it is not uncommon for police drug squads to obtain information from confidential informants which is very difficult to frame as evidence admissible in a court of law, often due to the desire to protect informants from reprisals from other criminal acquaintances and also because such persons may not withstand rigorous cross-examination. Confidential informants may, nonetheless, provide valuable intelligence, for instance that a particular drug dealer will be travelling in a specific automobile at a designated time with quantities of contraband secreted in a precise location in the vehicle. In such instances, the drug squad may arrange to have the vehicle made the subject of a police stop for a traffic violation, providing a pretext to then search and 'accidentally' discover the drugs. This is 'sharp practice' that may occasionally come to light.<sup>3</sup>

The tendency to undermine Taylorization efforts in police work is also apparent with regard to even mundane aspects of police patrol. Uniformed officers are subject to specified key-performance indicators having to do with the number of calls for service answered in a given shift, response times (the time between the call being received by a dispatcher and officer attendance at the scene), arrests, detections and so forth. Analysts can produce very fine-grained statistics concerning individual officer performance and a great deal of police work can be tracked, counted and measured and compared. The possibilities of monitoring and surveillance of officers' activities in 'real time' is a possibility in the near future. Officers are aware of this system surveillance and adapt to it. For example, an officer may be ordered to undertake a 'directed patrol' for the purposes of traffic enforcement (measured by traffic citations for running through stop signs) in order to slow down road users in the vicinity of a particular school. However, there may well be a difference between geo-locations where it is easy for officers to ticket offenders and geo-locations where children are vulnerable at school crossings. Faced with the need to produce good numbers, officers may well choose the former at the expense of providing a deterrent effect where there is a felt need (van Maanen, 1974, pp. 113; Ingram, 2007). From the point of view of managers of information flow, this goal displacement can be difficult to spot, until or unless the consequences are quite drastic; such as the case of the thirteen-year Toronto police veteran convicted of fabricating reports of traffic violations. To the judge in the case the malfeasance 'made no sense at all', but the officer in question was near the top of his platoon for issuing tickets (cited in Perrin, 1998, p. 371). Butler (1984) itemized a number of stereotypical police responses to quantitative management of police efficiency, including being too 'competitive', overly 'enthusiastic' and playing the 'numbers game' (pp. 248-253). The perverse incentives of quantification help to explain why 'street checks' undertaken by uniformed

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<sup>3</sup> For example, see Douglas Quan (2015) 'Toronto police planted loose heroin in suspect's car to justify illegal search, judge rules' *National Post*, Sept. 10, 2015; <http://news.nationalpost.com/toronto/toronto-police-planted-loose-heroin-in-drug-suspects-car-to-justify-search-judge-rules> (accessed Feb. 21, 2016). See also,

patrol officers have caused legitimacy problems for some Canadian police departments. As one commentator explained:

Many officers speak disdainfully of them [street checks] due to management's continual haranguing for more of them. The numbers game has even forced some pushback in the form of phoney names, addresses and bizarre descriptions. One card described a male of obvious South Asian appearance as female and white. A short person was described as eight feet tall ... a soured officer might intentionally target blacks to sabotage the system. Quantity replaces quality and the general public becomes far too familiar with a possibly abusive process.<sup>4</sup>

Attempts to Taylorize policing has progressed over time and the rationalization of information management has been developed and elaborated considerably. Ericson's and Haggerty's landmark book *Policing the Risk Society* (1997), documented the reasons for this shift, elaborating on the legal, economic and technological transformations in police organization at the end of the millennium. They record the reactions of police managers to the growing complexity of manuals and policy directives concerning the input of management information into police computer systems. In short, the manuals, like in information management systems themselves, have become "large complex and confusing" (pp. 347-48). They quote one police manager who opined that, amidst considerable organizational transformation, those in managerial positions "preferred crisis management rather than long term planning" (p. 348). Policy manuals for the management of information processing are useful in that they "articulate the administrative structure of reporting" (p. 349) and because "police organizations need the imagery of rationality" they provide (p. 348), but they are not very useful in the context of day-to-day police work, where the 'rule of thumb' prevails. As such the rulebooks form the basis of the promotional examinations that officers need to pass in order to attain managerial positions: "against a background of increasingly intense competition for promotion in police organizations, they [management manuals] are therefore useful for deselecting those who have difficulty with the formats and thinking associated with administrative rules" (p. 349). Policies for the management of information are also useful in the event that something goes wrong. When 'the wheel comes off' there are liability and disciplinary concerns and, since "every officer violates administrative rules every day ... the question becomes one of using the rules to discipline an officer who has been found wanting" (p. 349).

"The result" Haggerty and Ericson conclude

... is a perpetual sense of everyone's part of being out of control. The organization is experienced as a juggernaut. There is an endemic feeling of insecurity that is derived from a feeling of never having enough knowledge and from a reflexive awareness that there are always systemic faults that can be ameliorated by better communication rules formats and technologies (p. 447).

Whereas an earlier generation of police researchers found significant *lacunae* in the management of information flows which allowed a somewhat more *laissez faire* attitude towards such, the capacity of the growing 'surveillant assemblage' ensures that system surveillance now encompasses the lifeworld of the front-line police officer as much as it does society more generally (Haggerty and Ericson, 2000). What remains the same is that, united by the common bond of the *police métier*, both street cops and management cops still maintain an ambivalent attitude towards the management of information. All agree to treat it as important and useful in the promotion of organizational and individual ends and the management of information within the police organization remains focused on the usual suspects (Manning, 2010, p. 105-106). Echoing Giacomantonio, (2015, p. 165) the appearance of the police

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<sup>4</sup> [http://www.blueline.ca/articles/carding-\\_a\\_red\\_flag\\_at\\_many\\_levels](http://www.blueline.ca/articles/carding-_a_red_flag_at_many_levels)

organization as machine-like relies on police occupational norms and not formal machine thinking. Despite appearances policing is organized insecurity.

## Conclusion

Several decades ago there was a substantial attempt to shift the police *métier* to one of problem solving and community policing (Goldstein, 1990; Trojanowicz, and Buqueroux, 1989). Had that attempt been successful, police subculture and police organization would have been reoriented away from traditional habits and assumptions about crime fighting and the need to control, deter and punish the usual suspects and on to another set of concerns about how to foster community well-being and collective efficacy in the self-regulation of social order. Instead, the rhetoric of ‘war on crime’, ‘war on drugs’ and the ‘war on terror’ has subsumed all efforts to return policing to the community and the practices of crime-fighting have gained a new energy under the rubric of intelligence-led policing. The language of ‘policing with intelligence’ is persuasive because of underlying assumptions – often unarticulated – that the police organization is a rational bureaucratic machine that functions with law-like regularity. The image of policing as rational, bureaucratic and law-like is fundamental to its legitimacy (Reiner, 2010) but, as this paper has endeavored to show, it is not an accurate reflection of what goes on inside the police machine. The Taylorist vision of a wholly rational organizational form was never sociologically believable. Organizations work, to the extent that they do, for complex and interactional reasons that have to do with the beliefs that the people who give them life hold. The attempt to impose machine-like rationality onto organizations and machine thinking onto the people who make up their organizations need not result in rational outcomes because people always bring to organizational life many non-rational thoughts and ideas. The result of efforts to impose totalizing formal rationality onto human organization is, as Karl Mannheim well understood, all too often an unpredictable and substantive irrationality. When, as it’s the case with police institutions, the business of organization is the ordering of insecurity, the outcome of any attempt to impose such rationality can only be organized insecurity on the basis of substantive organizational irrationality. The police *métier* is a subcultural mentality and both street cops and management cops are steeped in it. If the lessons of this critique of rational police information management and organization seem too pessimistic to police reformers, then the lesson should be that the key to transforming police organization lies in non-rational ideas and notions about social peace and the good society that concern individual human dignity, social well-being and communal life. Policing as the maintenance of a state of prosperity for all is akin to classic ideas of the social contract and are compatible with the, by now sorely forgotten, ideas of problem oriented and community policing. Police work has always had social and political purposes and its practices are malleable and mutable – not law, bureaucracy or formal rationality, but the particulars of persons, places and events are what defines good policing and therefore discretion is its watchword (Martin, 1995; p. 201).

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