

## ‘INTELLIGENCE LED POLICING OR POLICING LED INTELLIGENCE?’

### *Integrating Volume Crime Analysis into Policing*

NINA COPE\*

*This paper explores the integration of volume crime analysis into policing. Based on qualitative research in two police forces, the paper outlines the importance of analysis for intelligence led policing. However, while the rhetoric of using analysis to target police activity is generally accepted, the practice is different. A poor understanding of analysis amongst police officers, and a lack of understanding of policing amongst analysts, influenced the usefulness of analytical products for operational policing. The paper also addresses police culture and the impact it has on perceptions of analysts and their products. The paper argues that training and development for both police officers and analysts is crucial to develop a productive working relationship.*

#### *Building the Foundations of Analysis*

Crime analysis is the process of identifying patterns and relationships between crime data and other relevant data sources to prioritize and target police activity (Gill 2000: 212). The uneven distribution of crime in terms of space and place (Bottoms and Wiles 2002; Sherman 1990), type of offenders (Graham and Bowling 1995), and victimization (Pease 1998), theoretically allows analysts to draw inferences from patterns of crime, which can be used as a foundation for allocating police resources.

Crime analysis has developed alongside the reliance on criminal intelligence to direct police activity, the growth of information technologies, and the requirement to monitor police performance (Fletcher 2000; Gill 2000; Manning 2000, 2001a). It also has sound foundations within the principles of problem-orientated policing (Goldstein 1979). Essentially analysts are information translators, whose role is to review information and provide reliable intelligence in a practical and operational format. There is a theoretical division between operational and strategic analysis (Gill 2000; Read and Oldfield 1995). While definitions of each analytical function vary, generally a tactical overview focuses on the identification of crime problems to direct operational responses such as high visibility patrols, and a strategic overview provides longer term, more detailed analysis of problems and their causes to facilitate strategic interventions, forecast crime and implement crime reduction strategies.

This paper, based on qualitative research conducted in two police forces and ongoing research of volume crime analysis, explores the practice of crime analysis and why it is

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important for supporting a model of policing that is directed by information and intelligence. A key argument in this paper is that fundamental inhibitors need to be negotiated to ensure the integration of analysis into operational policing and policing strategy. The paper discusses analytical outputs and the extent to which they are useful for operational policing. The second part of the paper focuses on the analytical profession more broadly discussing the conflict between civilian and police cultures and how this inhibits the development of crime analysis.

### *Methodology*

The research on which this paper is based focused on intelligence led policing and the process of information sharing through intelligence units in a county force and an urban force. This paper mainly focuses on participant observation conducted over a two-month period within local or borough intelligence units. The research offered analysts the opportunity to reflect on their role and how tasks were conducted, it also explored their general understanding of intelligence led policing and the processes in place to support information sharing and proactivity. Semi-structured interviews were conducted with key personnel within intelligence units including: 16 analysts; nine field intelligence or research officers who worked within the units developing intelligence; seven source (informant) handlers; and six managers of intelligence units and superintendents responsible for leading the tasking process. Informal interviews were also conducted with staff responsible for managing computer based intelligence systems and police officers who responded to the taskings.

### *Analysis in Policing: People, Practice, Products and Their Problems*

Fourteen of the 16 analysts interviewed for the research in the county and urban forces were civilian analysts. Their backgrounds and employment experiences varied considerably: eight entered the police service as analysts, while six had transferred into analysis from other areas in the police including crime desk support and administration. During the interviews the analysts suggested 'objectivity', 'being nose', 'the ability to realize what's important and what's not and be able to get rid of it' and 'having an investigative mind' were important skills for analysts. Recent recruitment aimed to attract graduates to the role in the hope that degrees (there was no focus on recruiting appropriate specialisms) would provide the skills to think analytically and process various sources of information, although an analyst with experience in intelligence work disputed this:

I think a lot of people with degrees make poor analysts...because they've been stuck in a certain stream and they haven't been able to examine other possibilities. I know a lot of good analysts who have no experience other than life...they want to know what is going on.

Of the 16 analysts in the research, only five had a first and/or postgraduate degree. The urban force also had two police officers in analyst roles. Reviews of analytical products within the research suggested that neither having a degree (either in a police/crime related or generic subject) or previous experience in the police necessarily provided analysts with skills for good analysis. As analysis aims to provide an overview of information based on intelligence, police officers traditional reliance on experiential knowledge

meant their skills were not automatically transferable into crime analysis. An officer in an analytical post discussed how her police experience influenced her analysis:

I don't know really. My experience really, I have been in the job a long time, but that sounds a bit obnoxious. It is just passing on experience really because I have been in the police environment for a long time I like to think that I pass that on, but I don't know really, I can't personally say. I mean I do the same [analytical] job as anybody else... I suppose there are advantages because there are some police officers who are very biased against civilian staff in general, I like to think sometimes you can back that off because you are the same as them. I mean I have been thought of as lots of things, as a civilian or a sergeant, people don't immediately know that I am a police officer in this office. (Melanie)

Melanie's comments suggested her police experience contributed to her ability to do analysis, but crucially she felt it helped to legitimize analysis amongst other police officers. Megan, a civilian analyst in the county force also thought that her experience as a special constable while working in another force helped to get her analysis accepted:

I've found my specials background to be very, very useful, particularly because at one stage I was being a special on the same division as I was doing analysis. So basically what I was telling the officers to do, who to target, where to go, etc., I was actually out there doing it with them which gave a lot more credibility to what I was producing cause obviously I'm not going to send myself on something that's a wild goose chase.

The ability of analysts could not be presumed and all the analysts, be they graduates, police officers, or those with a range of different job experiences, needed the appropriate support, development and specialized training for their role.

#### *Why is analysis important to the police?*

The emphasis on knowing and controlling risk in modern societies has influenced techniques of crime control (Maguire 2000). The process of intelligence led policing exemplifies concerns with identifying, prioritizing and intervening to minimize risk. Intelligence can be understood as information developed to direct police action. Figure 1 summarizes five stages that are fundamental to the process of intelligence led policing (ILP): acquisition highlights the requirement for an information infrastructure to support the police so that it has the means to capture, store and catalogue information

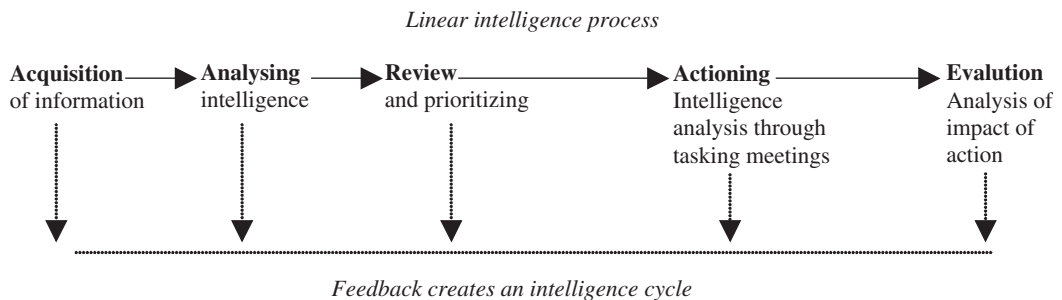


FIG. 1 The intelligence process and cycle

in order for it to be interrogated. Analysis converts raw information into actionable intelligence by seeking patterns in crime data, linking criminal events or constructing detailed suspect profiles. The review stage provides the means to prioritize intelligence so that the most critical crimes and risks can be acted upon first. The final stage concerns the evaluation of action through analysis. Although the research indicated that evaluation is rare because analysts frequently lack the expertise to conduct evaluative analysis and there is limited feedback from operational officers about what action they have taken. The process can be linear, where information is passed through each stage to develop it for action, or based on feedback at each stage thus creating an intelligence cycle (Cope *et al.* 2001).

Crime analysis is crucial for intelligence led policing to work effectively because it endeavours to deliver the 'right information...to the right people at the right time' (Fletcher 2000: 114). As an analyst explained:

If you took analysis out [of intelligence led policing] then [policing] would be driven by every bit of intelligence that is out there floating around...information would just be misused. You can't act on every single bit of information. You need somebody to do something with it. (Analyst, county force)

Crime analysis incorporates the collection and review of information into manageable summaries, for example crime maps or networks charts, to facilitate its interpretation. When the nature of crime problems is better understood, recommendations for action logically follow. Throughout the research the notion of analysts providing recommendations for police tasking stimulated considerable debate among both analysts and police officers. Civilian crime analysts were concerned about their lack of expertise in operational policing, as an analyst commented:

I say 'you're the trained policeman, policewoman, why don't you suggest [the tactics]'... How could we suggest, well I think we get a camera here and do that... How can we possibly know that?

Police officers felt uncomfortable accepting recommendations from non-police personnel, suggesting this encroached upon their role. Analysts' recommendations do need to be developed in consultation with officers who have appropriate expertise, ensuring operational plans are developed in partnership. However, analysts may recommend a variety of interventions for the short, medium and long term, rather than only focusing on operational police tactics. Emphasizing the distinction between the capacity to *make recommendations based on research and analysis* with the *capacity to make decisions about adopting recommendations and directing action* is necessary.

The National Intelligence Model (NCIS 2000) currently provides an operational structure for the organization of intelligence processes in police forces. In simplified terms, the model advocates a systematic procedure of gathering, storing and analysing intelligence to support a tasking meeting that reviews problems and allocates police resources accordingly. The model recommends a specific meeting structure to develop quick time and long-term responses to problems. It also outlines a range of analytical products that should be produced to support the tasking process. The model is based on a clear distinction between level 1, defined as crime that has a local impact which can be tackled by a basic command unit; level 2, defined as cross border crimes that affect more than one basic command unit; and level 3, national and international crimes. This paper does not criticize the concepts or processes defined by the National Intelligence Model; neither does it evaluate the feasibility of the distinction between level 1, 2 or 3 crimes, although the research did highlight some practical difficulties for

law enforcement associated with the relationship between these three levels. Rather this paper focuses on the processes of analysis and how it supports and interacts with policing particularly at level 1 within borough intelligence units.

Both forces in the research had developed processes to support intelligence led policing. The county force had identified 'standard analytical products' including offenders network association charts and overviews of crime patterns for the tasking meeting. The analysis was produced by two analysts working in the borough intelligence unit (BIU) and five analysts within the level 2 Force Intelligence Bureau (FIB). The analysts in both the urban boroughs also provided overviews of priority crime, such a burglary, robbery, and vehicle crime to the weekly tasking meetings, although a corporate approach to analysis was less developed. A total of eight civilians and a police officer provided analytical support across two local intelligence units.

### *Analytical Products in Practice*

Whilst analysis was integral to the theory of intelligence led policing, the majority of borough crime analysts interviewed for the research suggested they were not integral in practice but had become relatively 'silent partners', in that their presence was theoretically essential, but their products were often overlooked. Frequently analysts' work was sidelined, 'a lot of products are window dressing', an analyst commented. Products were also described as 'wallpaper' by both analysts and police officers and were ignored when planning operations. Rather than being used proactively, analytical products were demanded at the end of an operation to summarize the outcomes or used to justify an operation that was already planned. Although analysis was distributed in reports for tasking meetings and made accessible through officers' briefings, on computers and posted on notice boards, feedback or queries about analytical products were rarely received. The research suggested that a number of factors influenced the relegation of analytical products. This paper focuses on the quality of information and the lack of understanding and skills amongst analysts and police officers of one another's role and remit.

#### *Quality information means quality products?*

Some analysts interviewed suggested they had access to all information coming into the intelligence unit:

Even the other officers in the [borough intelligence] unit don't read everything like we do. I don't even think the sergeants do. They say they do but I don't think they do. We're the only ones who read everything...every single piece of paper that comes through from anybody, even outside, from a source... anything. The analyst reads everything. (Pamela)

However, analysts did not always have sight of all information. Crucial areas were missed, for example information from investigating and partnership officers or, as an analyst explained, 'some of the sensitive stuff...', may not be seen and cannot be included in their products:

The negative for me [about analysis] is not always having the full picture, not always getting information... it is just that with the products, it's just a reflection of the quality of all the information we had at the time, and not a reflection of what actually happened. (Analyst, county force)

Data quality affected the development of analysis. Analysts frequently found crucial details missing from intelligence reports for their products. For example, in the urban borough a robbery analyst explained that by focusing on victims of robbery, a detailed review of problem areas and potential targets could be gained. However, information about the victims, their route and purpose in an area, what was stolen and how it was snatched was often lacking from officers' reports. Another example relates to the associates of prolific offenders which enabled network association charts to be developed, yet often stop and search reports on individuals did not name the people they were with, as an analyst in the county force explained:

From my point of view, you stop and check a person, drunk in a car and he's got four passengers. We might know about the driver of that car, but you could tell me the four others... You might not see that as significant at the time but when that information gets fed through to [me], if it was in a particular street that's got a particular pattern of burglaries then you know, oh, well that person driving that car was one of our main burglars and we didn't know he was associating with those people. The bigger picture comes out of it. (Jill)

Another analyst agreed that the quality of data potentially undermined the accuracy of analysis:

If you look at some of the standards of the 'cruise reports', they're absolutely appalling... they've got the house number wrong; they've got the beat wrong. When it goes onto (an IT mapping package), it will map where [crime has] not actually happened so you get a false hot-spot. (Analyst, urban force)

As the computer intelligence databases were the primary source of information for analysts, the quality of analysis was integrally linked to the quality of information on intelligence systems. Consequently the poor quality information and lack of detail on the systems inevitably limited their analytical insights so that they focused on what had happened and provided statistical summaries of crime data. It was unclear whether officers understood the extent analysts relied on their inputs, although in an urban borough a criminal intelligence database supervisor commented that: 'Nobody trusts the analysts' stuff because they get their information from the [computer systems] and officers know they put crap on the system'. Many analysts were aware officers did not think their work was worthy of attention, as this urban analyst commented:

It is all down to the individual. There is an officer here I will not talk to because he's got no time for us, he won't listen. I've tried to explain to him what we can do for them if they put the information [on the system] but he's got no time for us at all.

Street level officers are an important source of primary information (Manning and Hawkins 1989) that is essential for the development of crime analysis. However, the power associated with withholding or accessing information is a crucial barrier that is manifested throughout the 'need to know culture' that engulfs intelligence work. In this respect the role of the analysts as information translators potentially challenges officers power, as Chan (2001: 146) notes: 'since information is a source of power, information technology can lead to power struggles... [it] can restrict the discretion and autonomy of street level officers, while at the same time enhancing the status of information technology specialists.' Its potential value may explain why primary information is rarely shared, as a civilian analyst commented:

The power thing... that's why it doesn't work very well with police officers being analysts cause they keep information to themselves. They're really not very good at sharing information... [There] are the people that won't put stuff on intelligence sheets. They do know a lot but they won't pass the benefit of their experience on. At the end of the day we all have a finite amount of time that we're going to spend working for the organization and what happens when you've gone... If they're not imparting their knowledge to others, then at their retirement, it all goes. You can't search somebody else's brain. (Megan)

Observations also demonstrated the extent to which some analysts were intimidated by the police organization. For example, while sitting with an analyst a telephone request for information came through, the analyst agreed but as he put down the phone he said it was an inappropriate request for an analyst, 'but the person sounded senior, so I thought I wouldn't challenge him!' While the analysts sometimes confronted directions in relation to their work and officers' limited information sharing, the ambiguity around their role, the pervasive lack of knowledge about analysis, and their position within police organizational hierarchy, limited the potential impact of challenges on officers' behaviour.

#### *Creating the understanding and the skills*

A significant inhibitor to the use of analytical products was police officers' lack of understanding of analysis and its potential to support policing, and analysts' lack of understanding of the context of policing and crime.

A number of police officers complained that analysis was poor quality or did not inform them of anything they did not already know about crime in their locality. However, their reactions also reflected a limited knowledge of analysis as an innovation in policing. For example, in the urban force officers of all ranks lacked training on analytical roles and functions, there was also little understanding of the associated information technology and its capability. The paucity of training on analysis affects police officers ability to ask the right questions of analysts in order to ensure the products are useful operationally. As policing grows progressively more complex, police officer training and recruitment needs to deliver pertinent information and attract those with skills commensurate with tackling a multifaceted and complex environment (Flynn 2000; Foster 1998).

Police officers' expectations of crime analysis were influenced by a culture in which information leading to an arrest was most valued (Chan 2001). This often led to unrealistic demands on intelligence and analysis:

Often the [networks] charts you produce... people look at it as though it's the be all and end all and the answer to all the problems in the world... I find it quite frustrating when you do the weekly reports and there was almost this desperate need to fit an offender into an area. You don't always know and you can't make it up... very often intelligence or information isn't enough to tell you exactly where [offenders] are committing crimes. (Ann)

They kept referring to all the people [discussed in the report] as targets... they are not targets. The people I mention in [the report] were people who have been seen in the area, live in the area or who historically are related to that particular area and that have caused us problems there before. They weren't targets as such... (Pamela)

The quality of analysis varied significantly on the urban and county boroughs. The depth of data analysis depended on time scales for work, analysts' skills, their level of conceptual understanding of their role, and of the crimes occurring in their area. Crucially, the expectations of the senior management in the boroughs also influenced the presentation of analysis, as an analyst commented: 'You get a few good [analytical processes] but the problem is you get the management come in. They want it changed to the way they want it.' Therefore, the nature of analytical products depended, to a certain degree, on how the role was interpreted, as this analyst in the urban force explained:

I think it depends very much on what the analyst role is... because it's never been specified. It's just something that's grown up. If the analyst becomes a person responsible for producing information or packages... then it would be much easier to task them to do that. At the moment, the analyst kind of does [various] jobs.

Management demands combined with the association between analytical skills and IT competence (Gill 2000) meant analysts often became key providers of management information on crime, crime statistics and crime maps within the borough, as an analyst described:

Maps [mapping software packages] is [*sic*] a problem... because we are the only ones that are trained in it... it is not an analyst's job... anyone can print a map... When we were working in the unit... you'd pick up the phone and start doing research for people, trying to find a photograph... at the time we were working on big event and association charts. Once you lost that train of thought, you've got to go right back to the beginning. (Mandy)

Assessing the quality of analysis is complicated by the variety of levels, including operational and management, at which analytical products can be interpreted. It was the operational officers that tended to find analytical products unhelpful, frequently because they were constructed for managers and their information needs differed. While the analysts in the research frequently challenged the demand for management information, these were undermined because their role lacked clarity and few others were sufficiently computer competent (although excessively technical skills were not required to produce maps for example) to be able to perform the tasks.

In both research sites the borough crime analysts had some difficulty developing their products beyond describing and summarizing the nature of current persistent problems. Forecasting, predicting and evaluating future issues that would affect the police were not prevalent in analysis. The tasking meeting report exemplified this descriptive approach. For example, in the urban force the report for the tasking meeting provided an overview of the weekly crime statistics. It provided maps and graphs that highlighted the distribution of crime across the wards within the borough and included some named suspects for some key crimes, such as burglaries, based mainly on the proximity of previous offending to the area where crimes had occurred. In the county force the report was similar and the analyst explained her frustration about the content of the report and the limited research that went into its production:

Some of the middle management side don't really appreciate what they get. They don't know how much work went into that [report]. They don't know how much work didn't go into it that [report]; if I'd had more time [what] could have gone into it. All the extra research that I wanted to do but just

didn't have time for... They have no idea of how long it actually takes to put that lot together and produce this pretty magazine, as I call it, every two weeks, in colour, and then what? (Pamela)

Tactical, descriptive and historical products were symptomatic of the lack of theory incorporated into analytical products (Eck 1998). For example, while hot-spots were identified, the reasons why crime persisted in certain areas, the specific crime generators and opportunities for intervention were rarely included. Volume crime analysis has firm foundations in criminological theories and environmental criminology (Bottoms and Wiles 2002). The lack of understanding about the context of crime and theories of criminality meant that while analysis can be understood as the interpretation of information about crime, in the research it tended to focus on the collection and descriptive review of data. To overcome this a senior officer in the urban force actively encouraged analysts to go out with police officers and visit high crime areas in order to gain a broader understanding of the context of offending and tactical policing.

Notwithstanding the importance of developing analysis to appreciate the theory and context of crime, there were examples of analysis providing a useful contribution to policing. For example, in an urban borough an analyst had reviewed and tracked all the incidents of disorder and violence around a local nightclub that resulted in the licence being revoked. The difficulty was transferring these complex and time consuming analytical techniques into day-to-day analysis that supported operational policing.

The analysts' position is not unique, as Ekblom (2002) notes there are a variety of barriers that prevent the application of knowledge generally into mainstream practice. Poor problem-orientated approaches, poor analytical thinking and a culture that does not support innovation, alongside fragmentation, occupational divides, media and public expectations all contribute to the lack of integration of knowledge into practice. Ekblom's *Conjunction of Criminal Opportunity* framework would be useful for both analysts and police officers as it aims to overcome the under use of knowledge by acting as a consultant to support practitioners through an 'intelligent, principle-driven replication, reconstruction and innovation to cover both the familiar, novel and anticipated crime problems and context' (Ekblom 2002: 179). It needs to be acknowledged that within a culture that is not used to routinely relying on evaluated, evidence-based approaches to tackling crime, that analysis (however well developed the products may be) has considerable obstacles to overcome.

### *Context of Analysis: A Clash of Cultures*

This section of the paper focuses on police culture and the extent to which it presents obstacles to the integration of analysis into policing. Despite their varied experiences and backgrounds, all the analysts had confronted similar struggles for acceptance and recognition within the police culture. Police culture refers to the informal values, norms and rules that influence how officers conduct their role. The range of distinguishable features of 'cop culture' includes a sense of mission, suspicion, machismo, isolation and solidarity (Reiner 1992). While core characteristics enable police culture to be identified, critics have suggested that too much distinction is made between the informal, so called canteen culture, and the formal culture (Herbert 1998) and that the concept is over generalized and viewed as monolithic and unchanging (Chan 1997). To fully understand the complexity of police culture, a variety of cultures, from

'street cop' to 'management cop' (Reuss-Ianni and Ianni 1983) need to be understood, along with the potential for culture to enable, as well as inhibit change (Chan 1997). Little is known about civilian cultures within the police. Police forces increasing reliance on civilians to perform a range of administrative or 'pseudo-policing' functions raises questions about whether civilians form a culture in themselves, or approximate to general police cultural norms whatever they may be. This would be worthy of further study as police functions are devolved to other 'experts' within police organizations.

This paper is less concerned with the facets that constitute police culture. Rather, it focuses on officers' solidarity, which excluded analysts, and officers' roles as 'experts' in matters of crime, which the analysts encroached upon. Quality analysis requires a synthesis of a range of information sources with time to reflect on their relationship with one another. In many respects analysis represents the antithesis of traditional action-oriented police work, which police officers have long valued over more mundane paper work tasks (Gill 2000). As intelligence has become increasingly important in policing, officers' roles have shifted in emphasis towards knowledge work. Indeed in the risk society where security is prioritized, Ericson (1994) notes that reactive policing is not just a demand for service but also a demand for knowledge, where police officers are regarded as 'experts' and key knowledge brokers. However, police officers are not the only experts in policing, as Ericson and Haggerty (1997: 27-8) note:

A police bureaucracy does not consist of a single professional group but is a collection of experts from many professions. For example, there are civilian professionals in information technology, law, social work, psychology, education, business administration, medicine and engineering. There are also police officers who hold university degrees and are members of various non police professions . . . but because of the research bias in favour of street-level decision making, there has been no substantial research on what these staff do within the division of policing labour.

Despite the recognition that knowledge abstraction and production is a collective process, the research demonstrated that street level police officers continued to exert considerable control over the intelligence process. Returning to the five stage intelligence process (see Figure 1), the first stage, focusing on the input of intelligence reports into criminal intelligence databases, and the fourth stage, concerning the outputs in terms of actionable taskings that generate further intelligence inputs, are crucial for maintaining analysis and the intelligence cycle and remain the responsibility of street level officers. However, the analytical and tasking process, by replacing street level officers' discretion around prioritizing problems, potentially reinforces the tension between management command of events and street level officers' discretion (Manning 2001b; Ericson and Haggerty 1997). Throughout the research there was little evidence in feedback and de-briefings that officers consistently responded to proactive taskings, which certainly frustrated the analysts, as one explained:

The biggest frustration of analysts is the fact that people do not action the work that we produce. We're constantly asked about crime levels and what's going on about it but at the end of the day the analysts only produce recommendations. If they're not acted on, there's nothing more that we can do. We make suggestions, we make suggestions strongly, if we believe them to be important. But . . . the police organize their resources how they see fit . . . there's nothing we can do about it. Overall, I would suggest that very few of our recommendations are actioned . . . and that is very frustrating.

As analysts rarely evaluated the effectiveness of recommendations or the use of their products, it was unclear whether the lack of action was a consequence of reactive demands on the police or was a rejection of the tasking.

*Maybe it's just because I'm a civi?*

Analysts regularly alluded to their civilian status as a reason for their expertise being overlooked, as this analyst explained:

When I started [to work at one force] they obviously thought I was a secretary and it took a long time for them to realize that I really wasn't. We were given a rank [and] how we would fit into the police structure, which was [equivalent to] either a DS [Detective Sergeant] or a DI [Detective Inspector]. Some of them were really clued up thought that we were like Inspector level, but PCs just could not believe in a million years that we were. (Tracy)

The problems associated with analysis extended beyond the civilization of the role. The perception of analysts and analytical products was influenced by the gendered nature of police organizations. Among those observed only 5 of the 16 analysts were male. In her study of Community Policing, Miller (1999) proposed that less desirable policing tasks, such as those performed by the 'office cops' became associated with feminine traits and these were regularly sidelined by police officers in pursuit of masculine crime fighting roles. As the police traditionally value 'crime fighting' over paper work, the perception of the analytical role as administrative, office based and supporting 'real' policing influenced officers' attitudes towards analysts and how they exercised their power in relation to accepting or rejecting analytical products. Miller (1999) suggests that to move policing forward the fundamentally masculine culture needs to be attracted to conduct and appreciate tasks perceived as feminine or 'women's work'.

Civilian analysts were graded commensurate to police officers ranks, although as with all civilian posts their pay and contracts differed to police officers. However, the analysts in the study often tried to make sense of their role in relation to the hierarchical police structure, as this analyst explained:

The grading structure's quite strange ... between civilians and police. [The basic grade analysts], our managers are always sergeants ... but we actually outrank them according to the [forces'] own ranking system. As [a senior analyst] I outrank everybody in the intelligence unit including the DI according to their grading system. But that's not how it operates, in fact that's merely something on a piece of paper ... It comes down to having a clearly defined role. Senior management seem to know what you are there for and are supposed to be doing, and others don't necessarily understand why you are civilian and most of the civilians in this building are administrators. (Andy)

The difficulty of aligning police and civilian grades highlights the inability of a hierarchical structure to easily accommodate a range of expertise. The analysts' grades were probably overlooked because the role they performed was different to a Detective Sergeant or Detective Inspector. For example, few analysts were responsible for a team of people. However, the grade was commensurate with skills required to conduct quality crime analysis. As police forces recognize the complexity of policing, their need to rely on a range of expertise to ensure effectiveness and efficiency will increase. However, integrating 'experts' may require a restructuring of the organization, for example growing information technologies has resulted in organizations based on networks,

rather than more traditional hierarchies (Innes *et al.* 2001). For the police this means recognizing individuals for their role, rather than rank, which would require a fundamental cultural shift in how police and civilian roles are conceptualized.

*Police knowledge and analytical processes*

Police officers and analysts had fundamentally different approaches to understanding crime problems. Police knowledge is contextual and grounded:

The basic and fundamental knowledge of policing is believed to be the facts at hand gathered on the scene that only the person there can understand fully and in depth. All valid police knowledge is thought to be contextual knowledge, surrounded by unexplicated, tacit assumptions and meanings... The validity of this type of knowledge is derived from a police belief that police officers should learn and know social life in precisely this detailed and grounded fashion. (Manning and Hawkins 1989: 146)

Analysis offers a synthesis of data about crime that is developed out of context (Peterson 1990). The analytical process de-contextualized and sometimes de-personalized crime data in order to develop an overview of the nature of crime problems. To explore patterns between criminals, events, times, and places to produce overviews of crime, analysts need to engage in a process of researching information and decoding and encoding intelligence. There are obvious parallels here between analysis and criminological research. To ensure their quality, analytical processes, like research, have to be reliable, verifiable and generalizable. However, observations revealed that analysts frequently found it difficult to articulate the coding processes they used to prioritize their data, potentially undermining the replicability and reliability of the analytical process. Indeed analysis on boroughs often failed to achieve one or all three of the above, albeit for the complex variety of reasons. Not all analysts appreciated how problematic an unsystematic process might be, as an urban analyst commented: 'Analysis is an intuitive process, you can't just apply the tools to analysis, you should have a natural grasp of what is relevant because that's the way you work.' While analysis certainly demands innovation and creativity to explore a range of linkages between crimes, the *analytical process* needs to be consistent and rigorous to ensure the patterns identified are not spurious but reliable.

Throughout the research in both forces it was evident the police worked on constructed *experiential knowledge*, which framed how crime problems were perceived and the prolific protagonists of crime that needed to be targeted. This knowledge was held in officers' heads and was rarely recorded or systematically documented (Manning 1992). Gill (2000) discusses that officers' tendency to rely on experience means they frequently 'round up the usual suspects' in the process of crime control. As an analyst said: 'There will always be police officers, that say 'Oh I know who it is, it's Joe Bloggs, he's bang at it... that's one of the favourite sayings, he's bang out, he's well at it... as far as those people are concerned, analysis isn't really important.' The difficulty with experiential knowledge is that if it is not passed on and reviewed, it can lead to *policing-led intelligence*, thereby undermining the intelligence led process. As an officer in the county force described:

... The whole intelligence led process can be corrupted by the banter that goes on and the self-fulfilling prophecy. You know that someone can become a [target] because everybody talks about them, and

then we start targeting them and because we target them they become something that they are not...you could be going in the wrong direction because we believe something rather than know something...It is the failing of the [intelligence] unit.

The analytical approach, drawing upon various data sources to develop an overview of crime problems, is contrary to traditional police working practices. However, the ability to review a variety of information sources is a strength of analysis, as it offers a medium for disseminating a range of information about crime, which often, particularly in relation to volume crime, cannot be processed by police officers (Ratcliffe and McCullagh 2001).

Analysis provides the opportunity to rationalize policing (Manning 2001a), but in the process can potentially undermine core knowledge officers rely on to make sense of their world. To manage the complexity of policing officers use a range of rituals and routines to ensure they are able to comprehend the environment in which they work and deal with its inherent uncertainty (Manning 2001b). An example is the process of differentiation described by Ericson and Haggerty (1997). By differentiating between social groups, the police are able to direct their attention towards those perceived as more risky in terms of offending, although it can result in harmful stereotyping of certain groups. The process is not objective, but based on experiences and knowledge gained through routine police activities, indeed it might be suggested that the constructs of risk mean the police focus too much attention on youth and lower socio-economic groups (1997: 259). Conversely, analytical overviews aim to prioritize interventions to where their impact will be greatest. However, this macro picture of crime may not correspond to officers' micro experiences of crime in their area. For example, in one borough officers suggested there was a significant robbery problem near a large transport interchange. The analyst, based on reviews of crime data and crime mapping, suggested that while the station locality was problematic, the problem was not significant enough compared to three other locations situated further south in the borough. In such situations officers face a dilemma; rely on their own experiential knowledge (which arguably has served the majority well prior to the advent of an intelligence led approach) or respond to the information developed by an analyst with no experience of 'working the streets'.

The majority of borough crime analysts interviewed for the research felt their legitimacy was undermined because they gained information and developed knowledge in different ways to officers. This was reflected in a comment by a police officer to the burglary analyst in the urban force who said, 'it's all right you sitting there but you don't have the nose for what's going on.' Essentially analytical products lacked credibility amongst police officers, as an analyst suggested:

You're saying our best guess is if you go and patrol this beat at these times, that's the most likely place that you'll catch somebody committing a crime. I know what it's like to actually be in a beat car or on foot patrol in a beat area when nobody commits a crime whatsoever...they're thinking that analyst is talking rubbish [and] you can understand why they do get that impression.

This goes some way to explain why, despite its potential, analysis was not necessarily integrated into officers' working consciousness and why the emergence of analysts as new experts in crime, using different tools to support and develop their expertise, was received sceptically by some police officers.

Volume crime analysis has yet to realize its full potential in policing. Given the skills deficit on either side, what analysts and officers need to strive for is a balance between both their worlds; reconciling the grounded, contextual knowledge with overviews of data. In the urban force this was illustrated through the close working relationship between a sergeant and a robbery analyst where they drew on each other's expertise, as the police sergeant explained:

I think [with the analyst] it's just different strengths. [The analyst's] knowledge of crime patterns and the analysis side of [crime] was greater than mine. I just trust his judgement. I'm not going to try and compete with him . . . I'll just trust what he's telling me. But likewise I've probably got a stronger background in dealing with people on the streets . . . I've dealt with them, I've arrested them, I've stopped them on the street. I've worked on the streets here for quite a while in the crime squad, the problem solving team, and the uniform relief was all based on the street, dealing with these people . . . day-in-day-out. [The analyst and I] found it quite easy to work together because [the analyst has] got quite a strong knowledge of crime pattern analysis and what it can do in that field and I've got quite a strong knowledge of the criminals on street . . . [the analyst] will bounce things off me, and I'll bounce things off him and it does seem to work quite well . . . because I've got the street expertise and experience and he's got the office expertise.

### *Conclusion*

Policing is increasingly relying on intelligence to target, prioritize and focus interventions. Indeed, as society progressively desires security, knowledge to control the risks associated with crime is critical for minimizing public anxiety around offending and offenders (Garland 2001; Ericson and Haggerty 1997). However, the police can produce volumes of intelligence, which only becomes useful operationally after it has been interpreted, assessed and any potential patterns and linkages investigated. It is in the translation of raw information into operationally viable intelligence, that analysis plays its crucial role. However, the research on which this paper is based has highlighted the chasm between the theory and practice of intelligence led policing and the current role of analysis.

This paper highlights two difficulties that inhibited the integration of borough crime analysis within two police forces. The first focuses on the current quality of analytical products and the contribution they can realistically make to operational policing without an improvement in the information on which they are based, the clarification of the extent to which analytical products should provide management or operational information, and an effort to develop analysts' understanding of policing and police officers' grasp of analysis. Therefore the difficulties associated with developing and integrating analysis into policing highlights fundamental training needs for both officers and analysts. The level of mutual misunderstanding between the police and analysts in the research created a potentially dangerous and depressing self-fulfilling prophecy. The analysis had become a descriptive formality, partly because the analysts lacked the quality information to improve their products. Officers were unable to ask the right questions of analysis and their mistrust of it, because it was descriptive and did not tell them anything, also contributed to their reluctance to share information with analysts. Without a detailed understanding of their mutual roles, processes, epistemologies and expertise, the hope of developing a productive relationship seems unachievable.

The second structural difficulty involves the integration of analysis into existing working principles that are embedded in police culture. Police knowledge is contextual and subjective, while crime analysis is conducted out of context to develop overviews of crime problems. Negotiating these differences is crucial to generate legitimacy and respect for the knowledge produced by crime analysts so they can be viewed as a new generation of crime experts. Currently the role of borough crime analysts is narrowly conceived, there is considerable potential to extend their role and they need support to fulfil their potential. Analysts must develop theoretical insights, consult a range of data and resources and provide critical overviews of information and crime problems for their boroughs. It is not impossible for borough crime analysis to be integrated into policing, however, recognition of the skills of both cultures and their expertise is a necessary prerequisite for a mutually supportive and productive working relationship.

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