Vesa Huotari (ed.)
Researching the Police in the Nordic Countries
– Proceedings from the Fourth Nordic Police Research Seminar

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ABSTRACT

The fourth Nordic Police Research Seminar was held in Tampere, Finland, in November 2012. Eleven of the presentations that were delivered at the seminar are published as research articles here. In their articles, the authors from Denmark, England, Finland, Norway and Sweden cover a number of themes ranging from strategic management in police administration to popular TV dramas featuring police work, e.g. police education, strategies in policing white-collar crime and tax-frauds. The articles include both a theoretically oriented analysis on the concept of empathy and intelligence-led policing, a phenomenology-inspired conceptualisation of crime investigation, statistical analysis of economic crime, qualitative empirical analyses relevant to the development of police education and a meta-analysis of the of role of the DEA in determining organizational efficiency in law enforcement. The diversity in research approaches in terms of the theoretical, methodical and practical underpinnings to police work and policing stand as evidence of the way in which this research field is rapidly and continuously evolving.

1 INTRODUCTION

In the spring of 2012, the Police College of Finland in Tampere sent an invitation to police researchers in the Nordic countries and beyond, especially in Scotland, to come and introduce, share and discuss their latest observations and theoretical insights at the fourth Nordic Police Research Seminar on 7–9 November 2012.[1] For us, "Nordic police research" included all the research work that is, in one way or another, related to the police or policing in this corner of the world and that is conducted by researchers who identify themselves as police researchers or do not mind being identified as such. The seminar was to provide an opportunity to become acquainted with Nordic police research in its current form. We looked forward to organising a seminar that would give a good picture to everyone interested in learning about Nordic police research and opportunity to meet Nordic researchers.

Our seminar programme highlighted the work of four seasoned researchers in the field of police studies, who served as the keynote speakers, and four younger researchers representing a new generation of police researchers. These presentations were supported by presentations in parallel groups. We kindly requested that the participants forward to us their presentations in the form of an article by the end of the year so that we could include them in a published conference proceeding. We received a positive reply to our request from thirteen researchers and currently have a seminar report consisting of ten articles.

Most of the articles approach the police and policing from a distinct perspective. The only theme connecting several of the articles is police training and education. As a whole, the articles published in this seminar proceeding just hint at the variety of themes, perspectives and approaches that were introduced and discussed in the seminar. They also characterise police research as a field quite well — the research is amorphous, but also evolving and thought-provoking. Any attempt to give a comprehensive account of it would be both impossible and futile.

We only have temporary fragments or pieces of research that will be surpassed soon by other texts both from their original authors as well as from others; the ideas and insights presented in each of the fragments give us a great deal to ponder for the time being. However, this report hopefully invites the reader to join his or her efforts with ours in research dealing with police and policing.

In the first article, Matti Vuorensyrjä analyses the use of Data Envelopment Analysis (DEA) in determining the efficiency of police organizations. He discusses thoroughly the assets and shortcomings of this method. The analysis builds upon a review of 18 cases where DEA has been applied to the field of law enforcement. In a time of austerity, his recommendation that efficiency analysis should not function as the sole basis for managerial manoeuvres serves as a valuable reminder and is worthy of attention.

Ian Cummins, Marian Foley and Martin King describe popular characterisations of police work in films and TV dramas through the eyes of experienced police officers. Evidently, displaying everyday police work as it unfolds in reality would not be a recipe for success for a police drama. The police officers interviewed in their pilot study felt that crime and its effects became sanitized in TV dramas both in terms of the physical impacts of violent assaults and the long-term impact on the families of the victims. In their article, the authors discuss the various dimensions and aspects of popular representations of police work in films and TV dramas that are nowadays watched all over the world.

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1   Conference proceedings from the first Nordic Police Research Seminar in Växjö 2008, http://lnu.se/polopoly_fs/1.22998!20085.pdf, and the third in Umeå 2010, http://www.polis.umu.se/digitalAssets/82/82326_konferensskrift.pdf.

The articles by Roger Söderlund, Åsa Sjöström and Miguel Inzunza deal with police education. Although they approach it from different perspectives and theoretical angles, their main concern is how to improve it.

The police are, in specific circumstances, authorised to use force against citizens. However, police officers are also likely to face assaults and violence directed against them. They, as Roger Söderlund explains in his article, need skills both in arrest techniques and self-defence. Without doubt, learning such skills and being prepared to face situations where they may be needed constitute an important part of police training all over the world. He interviewed police officers and asked for their views on the relevance and adequacy of their basic training in terms of the acquisition of these skills, and he makes some suggestions based on these interviews.

Åsa Sjöström explores training scenarios dealing with drug-related crimes as well as the demands for the respective learning of police students. She points out several challenges pertaining to innovative and conservative forces both in terms of police practice and police education.

Do police officers need empathy in their work? If the answer is affirmative, how can we tell which persons are more emphatic and which are less emphatic when screening the applicants for the open student vacancies at police colleges and schools. This question is addressed by Miguel Inzunza. His article explores the relevance of empathy as a selection criterion for the police profession and scrutinizes appropriate theoretical concepts of empathy for police work.

Thomas Bille approaches police work from a life-world perspective and conceptualizes it as a transformational learning process. For him, crime investigation is not just about treating facts as potential evidence but also about sub-conscious and bodily grounded intentionality that goes beyond reason.

The article by Johanna Skinnari studies popular myths related to economic crimes in an empirical light. She identifies the kinds of costs and risks that are in-volved in large-scale tax frauds. Her article provides insights and offers suggestions for how to prevent tax fraud and how to detect guilty of tax fraud.

In his article, Petter Gottschalk focuses on white-collar crimes and white-collar criminals in Norway and discusses various strategies for policing them. It is obvious that the knowledge and information management strategies that he introduces in his article play an increasingly significant role in detecting white-collar crimes and in catching white-collar criminals. As he states, information is the raw data that breathes life into an investigation; hence, there is a constant need to figure out better ways to process, handle, communicate, link and store it.

Organizational reforms have become a constant feature of police work not only in Finland, but also in other European countries. Arla Juntunen applies a strategy perspective and examines the structural and managerial changes in Finnish police administration in the 21st century. Her article addresses the managerial tools and strategy ideas that have been introduced to the police and put into practice within a short period of time. She explicates the challenges that are involved in all attempts to link performance management with strategy and strategy implementation.

In the last article, Vesa Huotari ponders the fate of intelligence-led policing within the context of a bureaucratic police organization. In addition to policing being increasingly intelligence-led, he finds that it should be knowledge-based too. Knowledge-based policing should be a joint accomplishment from police officers working together with other authorities, other professionals, local citizen groups, third-sector organizations and entrepreneurs, among others, aimed at building up social ties, networks and shared understandings as well as new local capacities and social practices. The powers and intelligence that the police possess will only be of limited use in terms of preventing crimes unless they are combined with the powers of others.

Vesa Huotari

2 EFFICIENCY ANALYSIS WITH A VIEW TO PRODUCTIVITY IMPROVEMENTS – A REVIEW OF DEA APPLICATIONS IN LAW ENFORCEMENT

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Introduction

The current paper is a theoretically oriented review and critique of efficiency analyses conducted in the field of law enforcement. Our primary focus will be on Data Envelopment Analysis (DEA). DEA is a non-parametric method of efficiency analysis based on mathematical programming (operations research). It has gained wide popularity in police studies since the mid-1990s as a result of seminal papers by Thanassoulis (1995), Carrington et al. (1997) and Drake and Simper (2000; 2003; 2004; 2005a; 2005b) (see the assessment by Barros, 2006, p. 23; 2007, p. 168)[2].

We will concentrate on the empirical findings from the law enforcement applications of DEA. On the basis of 18 empirical papers reviewed here, we will take stock of the practical value that DEA analyses have actually been capable of yielding. Specifically, are improvements in productivity theoretically feasible and empirically clear and concrete, when using efficiency analysis in form of DEA?

For the purposes of conceptual clarity, we begin the paper by depicting the standard Input Output model (IO model) of performance evaluation. Our model differs from earlier IO models in that, in addition to defining *the three E's* of audits and performance management, we define *the cost-benefit* model, *the cost-effectiveness* model, and differentiate between the concepts of *productivity* and *efficiency*, all within the context of the same IO model.[3] Hence, the model communicates on many different fronts of performance evaluation: economics (parametric and non-parametric methods of efficiency analysis,

cost-benefit analysis), management studies (the three E's of evaluation in performance audits and performance management, managerial effectiveness analysis, cost-effectiveness analysis) and evaluation studies (scholarly effectiveness analysis, impact analysis). Most importantly, the model reminds us of the limitations of the different methods of evaluation, including efficiency analysis and DEA.

We will keep an eye on the standard IO model of performance evaluation when going over to the review and critique of DEA. In addition to the problems that are known to characterize DEA, there are three further points that need to be made with respect to the limitations of the method.

1. *DEA appears to be incapable of penetrating the black box of technology*. We suggest that this is not a coincidental, but a necessary finding. The limitation has been noticed by some of the scholars in the field, yet it may be said that the idea has thus far resided in the margins of the scholarly literature. In this paper, we take a closer look at the phenomenon and develop an argument concerning its causes and consequences. Reference is made to *the methodological presumptions* characteristic of neoclassical efficiency analysis and to *the labor-intensive public sector organizations* as a field of applied DEA.

2. *Misspecification of the production function* is something that DEA as a method simply does not allow for. DEA is sensitive to misspecifications, measurement errors and outlier observations, and it severely punishes the analyst for such mistakes. This is because any deviations from the best productivity frontier – based on a measurement of the actual input-output combinations of the units under scrutiny – receive an inefficiency interpretation. Taking these two limitations together it may be claimed that

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2   According to Barros (2007, p. 168), "The general conclusion that emerge from this research are (…) that DEA is the leading procedure used in this context" (i.e. as an efficiency frontier model).
3   Cf. e.g. Henderson-Stewart, 1990; Carter, Klein and Day, 1993; Pollitt and Summa, 1999; Pollitt and Mul, 1999; for solutions that are slightly more restricted.

a) DEA is incapable of penetrating the black box of technology,
b) Misspecification of the production function is probable in such a situation (i.e. whenever there are technological solutions and factors of technology that are unknown to the analyst, and that still contribute, to a significant degree, to the production process),
c) DEA severely punishes analysts for the misspecification of the production function, primarily by making mistaken requirements for input reductions or output increments, which means that,
d) Policy advice based on DEA runs the risk of being seriously flawed.

3. There is a third point to be made. It is based on the wider methodological perspective of performance evaluation. This is but a reminder, really, but we wish to note that *decisions on allocation (proper) cannot be based on DEA*. The same applies to other efficiency analyses and to cost-effectiveness analyses. This is clear enough because it goes by the definition (is analytically true), but it is also something that needs to be kept constantly and consciously in mind. No managerial maneuver, therefore, ought to be based solely on efficiency analysis.

In concluding the paper, we return to the arguments at the heart of the study. We also briefly discuss the alternatives to efficiency analysis when trying to improve productivity in law enforcement.

The standard IO model of performance evaluation

The standard IO model of performance evaluation is depicted in Figure 1. Here, the *decision-making unit* (*DMU*)[4] receives the objectives (impact, target) and budget from higher up (strategic decision maker) and transforms inputs into outputs in the production process.

Technology of the DMU (*f*) transforms *Inputs* into *Outputs*, both of which are measured in physical quantities within a given, specified period of time. On the input side of the model, inputs are weighted by *Input prices*. The price per unit of input multiplied by the number of inputs equals the *Costs*. On the output side of the model, outputs are weighted by *Output prices*, whenever these are available. The price per unit of output multiplied by the number of outputs equals the *Benefits*.

The reader will readily notice, though, that in the model the concept of *Outcomes* inhabits the place of *Output prices* as a sort of allele. This is because, quite often, no information on output prices is available in public production. There are other conceptual means, therefore, that have been developed to account for the long-term total benefits that the end users get from public goods and services. Restricting evaluation to outputs – the mere physical quantities produced – is not an option. One of the concepts used to cover the benefits on the output side, over and above the mere physical quantities of outputs, is the concept of outcomes. In performance management, the concept of outcomes is closely related to the evaluation of effectiveness.

In performance management and performance evaluation, outcomes are supposed to capture the actual, long-term impact of the goods and services produced by the public agencies, programs or projects on the end users. Interest is in the impacts that are on target, i.e. those particular impacts which correspond to the managerial objectives of the production process. *Effectiveness* is understood as the degree to which the actual impact corresponds to the target impact.

This is the managerial concept of effectiveness, but not all there is to the evaluation of effectiveness. *Scholarly effectiveness analysis* – a truly vast field ranging from the early program evaluations of the 1960s (including the federal programs in the U.S., such as the Great Society) to the modern Cochrane Collaboration and evidence-based evaluation – may be said to correspond to performance management and performance evaluation in that, here too, interest lies in the long-term impact of the production process on the end users. Nevertheless, attention here is not re-

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4   Following the terminology provided by Charnes, Cooper and Rhodes, 1978, p. 429.

stricted to the impacts that are on target, although they do remain at the center of the stage of evaluation. In scholarly effectiveness analysis, *unintended effects*, *side effects* and *negative effects* have to be taken into account. Methodologically, *effects that can be measured but on a nominal scale* and *effects that cannot be measured at all* (subjective notions, emotional expressions, fuzzy descriptions that appear to violate binary logic) should also be considered. Scholarly effectiveness research is deeply interested in the mechanism (stimulus, process, response), that produces the actual impact on the end users. In empirical analysis, scholarly effectiveness studies strive for experimental (or quasi-experimental) research, with a double blind test being the ultimate ideal.

So, although managerial and scholarly effectiveness analyses share some of the core concepts of evaluation, the tone in the two endeavors is different altogether. Managerial effectiveness analysis takes the technology (f) of the production process largely as a given, and concentrates on the actual impacts that are on target. Scholarly effectiveness analysis, in contrast, takes great pains to understand the *technology* (the production process) of the public agencies, programs or projects under scrutiny. In this capacity, it also needs to take a good, detailed, *comprehensive look at the effects* that the objects of evaluation have *on the end users*.
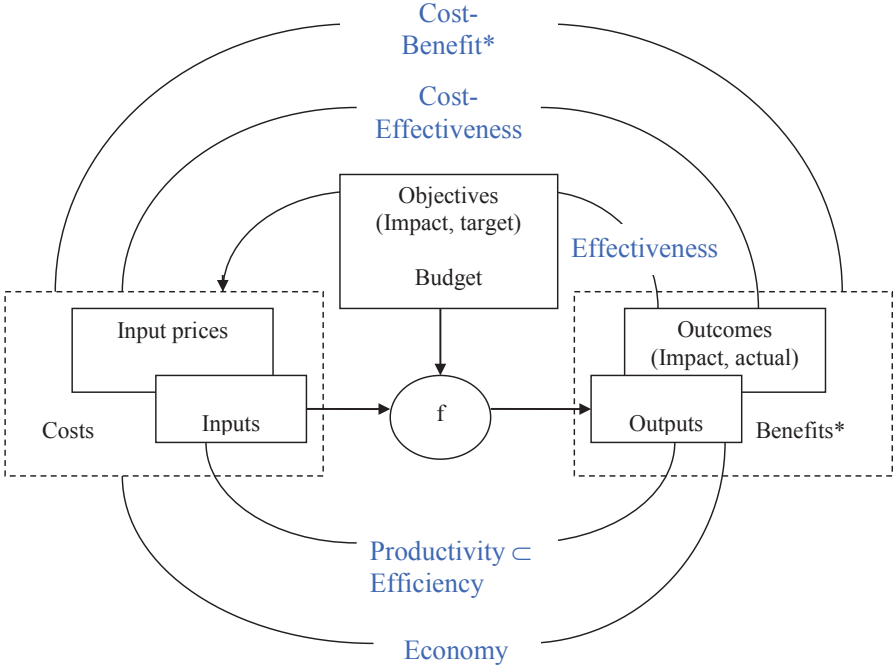

Figure 1. The standard IO model of performance evaluation

* Cost-benefit analysis is possible if and only if satisfactory output prices are available, along with input prices.
Source: adapted from Vuorensyrjä, 1998.

We are in a position to look at the different conceptual layers of the *Matryoshka doll* of performance evaluation. The structure is really that of a Russian doll, with nested layers, one on top of another.

Productivity, the ratio of outputs to inputs (y/x), is the innermost layer in the doll. At this point, we can drop the worry about the problem of there being many inputs and many outputs in the hands of the DMU (i.e. how to depict the ratio of the vector of outputs Y to the vector of inputs X in a multi-input–multi-output case?) We will shortly come back to this question. *Efficiency* can be depicted as the ratio of the actual, observed ratio of outputs to inputs, to the optimal ratio of outputs to inputs, $(y/x)^*$, that is to say, efficiency = $(y/x)/(y/x)^* \leq 1.$[5]

This immediately raises the question of how to get the optimal ratio of outputs to inputs. The optimal ratio of outputs to inputs is the best productivity frontier that we can obtain by empirically estimating the production function, whether by means of parametric or non-parametric methods of analysis, using data on a whole series of similar, or very nearly similar, DMUs. In principle, we could also obtain the optimal ratio of outputs to inputs from the laws and magnitudes of physics, but, in human sciences, this opportunity is rarely employed. Conceptually, *the optimal ratio of outputs to inputs = the best productivity frontier = production possibility frontier = the production function = technology.*

Next, we address the information on prices. Prices provide us with a qualitatively new kind of criterion for performance evaluation. Along with technical efficiency, it now becomes possible to look at allocative efficiency: whether or not the production process employs the optimal, cost-minimizing inputs, and whether or not the process results in the optimal, benefit-maximizing outputs. This is possible because, in a system of free exchange of goods and services, prices depict not only the actual exchange rates in-between the different goods and services; they also convey information on the marginal social benefits that these goods and services give to the end users, and to wider human so-ciety. The point here is that, in the process of innumerous marginal adjustments by individual agents participating in the system of free exchange, all inputs and all outputs get converted into one, single scale of relative values.

Under specific conditions, prices can be expected to be optimal in the sense that they relate to a fully efficient state of affairs in which improvement is possible for no participating individual without at the same time making some other individual worse off (*a Pareto-optimal state of affairs*) and which is stable in the sense that no one is willing to abandon the state of affairs by the means of his or her own actions. The full story of Pareto-optimality is longer than the confines of the current article possibly allow for. We settle for noting that, given the full house of violations of the conditions of optimality, – related to distributional equity, public goods and externalities, monopoly and oligopoly players in the market, market restrictions, information asymmetries, etc., – it still remains to be true that *there are no working alternatives to the theoretical gold standard of optimal prices*. (E.g. Kreps, 1990; for classic scholarly inquiries into the themata, see, for example, Arrow and Scitovsky (s.c.), 1969; Riker and Ordeshook, 1973; Cornes and Sandler, 1986; Sen, 1997.)

Economy, in the IO model, takes account of the costs and relates the costs to the physical outputs. Hence economy = $w(x)x/y$, where $w(x)$ denotes input prices. *Cost-Effectiveness* analysis takes the inference one step further and deals with costs and outcomes. We depict this by defining the concept as cost-effectiveness = $w(x)x/z$, where z denotes outcomes.

Cost-Benefit analysis is the outermost layer in the cake. It has to do with costs and benefits, with benefit-cost ratio written as = $p(y)y/w(x)x$, where $p(y)$ denotes output prices. But there is more to cost-benefit analysis than the seemingly uncomplicated formulation in the above.

Cost-benefit analysis is possible if and only if both the input and output prices reflecting the marginal social benefits of the volumes

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5   Note that these are not technical but conceptual definitions. At this point we pass by several methodological complications, such as the multi-input-multi-output case, the potential nonlinearity of the production function, etc.

1. are available as undistorted market prices, *or*;
2. can be determined by making adjustments to distorted market prices, *or*;
3. can be constructed for nonmarket public goods or services, using, for example, a hedonic pricing method, methods of revealed preferences, or methods that rely upon the willingness to pay (WTP) -criterion.

It is very often the case that no output market prices are readily available for public goods and services. This means that the first of the above alternatives (1.) is not an option. Allowing for this regular fact, we should actually redefine cost-benefit analysis, and write, as the definition, benefit-cost = $B(y)y/C(x)x$, where B and C denote output and input prices that are weighted on the basis of knowledge about price distortions (*shadow prices*), or price weights that are constructed with the help of hedonic pricing, revealed preferences, WTP-criterion, or some other, corresponding method of cost-benefit analysis. In reality, the second and third alternatives in the list are the bread and butter of cost-benefit analysis.

In the final analysis, cost-benefit analysis is very ambitious in its stated objectives. It strives to measure the full, discounted, long-term value of inputs (*Costs*) in relation to the full, discounted, long-term value of outputs (*Benefits*) – all preferences of all individual citizens and all aspects of the program or project included.

It is crucially important to understand what is actually lost when lacking output prices, $p(y)$, and when it turns out to be too difficult to construct working alternatives, $B(y)$. Whenever this happens, physical output quantities can be converted to no common scale of relative values.

This means that allocative decision making will stumble in the dark. It is not possible to single out the product line which is valued the most by the citizens. How much, quantitatively, should the level of production be scaled up? Should it be scaled down? No allocative signal from citizens as to the relative values of the end products is available to sort out the problems of allocation.

At the end of the day, management will have no idea about the profits the organization is making. For all that the management knows, the organization could be taking a bath. Without output prices, there will be no way of converting the vectors of the physical outputs and inputs into a single, common scale of values. There will be no idea of profits, $\Sigma\ B(Y)Y - C(X)X$, if by Y and X we denote the vectors of physical outputs and inputs.

Varieties of efficiency analysis

Efficiency was defined as the ratio of *the observed ratio of outputs to inputs* to *the optimal ratio of outputs to inputs*, such that efficiency = $(y/x)/(y/x)^*$. The optimal ratio of outputs to inputs is the best productivity frontier. We can obtain the frontier by computing or estimating the production function, using empirical data on many similar DMUs, or, alternatively, on the basis of a theoretical analysis of the production possibilities, using, for example, textbooks on the laws and magnitudes of physics.

In practice, according to Michael Barrow (1990), the methods of efficiency analysis can be divided into two basic varieties: *non-parametric* and *parametric* methods of efficiency analysis. Barrow also notes that, in addition to this, we can differentiate between *deterministic* and *stochastic* methods, and methods based on an analysis of *panel data* and *cross section data*. Simpson (2009) follows approximately the same kind of categorization and differentiates between an *index number approach*, *parametric efficiency estimation*, *non-parametric efficiency estimation* and *partial efficiency measures*.

These are all, essentially, methods for determining the shape and position of the best productivity frontier on a plane or in a multidimensional space of real numbers. Once determined, it will be possible to take a look at the position of a given DMU in relation to the best productivity frontier, and to say whether or not it reaches the frontier. It will also be possible to say how far, exactly, a given inefficient DMU falls from the best productivity frontier, to rank the DMUs on the basis of these efficiency scores, and to search for the potential benchmark DMUs.

Stochastic frontier analysis

Stochastic frontier analysis (SFA) was first introduced by Aigner, Lovell and Schmidt (1977; see also Jondrow et al., 1982) and Meeusen and Van den Broeck (1977) in two almost simultaneous papers. Two key ideas differentiate between stochastic frontier analysis and the usual econometric production function estimations, such as the log-linear formulation for the Cobb-Douglas production function, widely used in microeconomics (the production functions of private companies), and macroeconomics (input-output estimations for political economies) alike.[6]

SFA proceeds from *average model* estimations to *frontier model* estimations, and aspires to differentiate between qualitatively different components of the disturbance term (the residual, ε). The idea is to differentiate between *the normally distributed error term, v,* and *the inefficiency component, u,* so that ε = v + u.

Aigner et al. (1977) began their own analysis using an earlier model devised by Peter Schmidt. Schmidt had assumed a one-sided disturbance term ε ≤ 0 for a model in which the output y was estimated as a function of $(X; \beta)$, where X was the vector of inputs and β denoted the parameter vector to be estimated. The production function was estimated for N different DMUs, i.

$$y_i = f(X_i;\beta) + \varepsilon_i,$$
$$i = 1,\dots,N.$$

The model proposed by Aigner et al. (1977) was similar to the one proposed by Schmidt, except for the assumption in the new model that the disturbance term was composed of a) normally distributed series of error terms, $\{v_i\}$, $N(0,\sigma_v^2)$, and b) inefficiency components of the residual

$\{u_i\}$, with $u_i \leq 0$ for all i, and with a half-normal distribution truncated above at zero, $N(0,\sigma_u^2)$.

The output of a DMU must lie either on the frontier or below the frontier, but, as noted by Aigner et al. (1977, p. 24), now with the new model the frontier itself was assumed to be a stochastic part of the model, $y_i \leq f(X_i;\beta) + v_i$. In the event that the error term would happen to have zero variance, $\sigma_v^2 = 0$, the model would assume the structure of a deterministic frontier function with a one sided component $(-u_i)$ representing the DMU-specific inefficiencies. However, whenever $\sigma_v^2 \neq 0$, efficiency scores in the stochastic frontier model were to be depicted as follows (Aigner et al., 1977, p. 25):

$$[y_i]/[f(X_i;\beta) + v_i],$$
$$i = 1,\dots,N.$$

To actually estimate stochastic frontiers, Aigner et al. (1977) used maximum-likelihood techniques. Interestingly, in the empirical examples presented in their by now classic article, they found that, while the efficiency results from the non-parametric linear programming models differed markedly from the efficiency results of the parametric models (OLS; SFA), the results from the stochastic models were very close to each other. This is a lesson to bear in mind when considering the other efficiency models.

SFA cannot be estimated without first making explicitly specified assumptions concerning the different components of the disturbance term. Also, the shape of the production function needs to be specified when building up the empirical model. So, as the habitual critique of SFA goes, the method may be error prone because the analyst is forced to commit him- or herself to specific assumptions concerning the

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6   $y_i = \alpha x_{1i}^{\beta_1} x_{2i}^{\beta_2} e^{u_i}$

$ln y_i = ln\alpha + \beta_1 ln x_{1i} + \beta_2 ln x_{2i} + u_i$

Here, y denotes output and x_1 and x_2 are inputs. The intercept of the model, α, is the level of technology. Technology is common to all DMUs, i, under scrutiny. β_1 and β_2 are the partial elasticity coefficients of output with respect to the inputs. The disturbance term is written as u and e is the Neper constant. The sum of the coefficients, $\Sigma = (\beta_1 + \beta_2)$, reveals the estimated returns to scale in the model, with
$\Sigma < 1$ ~ decreasing returns to scale,
$\Sigma = 1$ ~ constant returns to scale,
$\Sigma > 1$ ~ increasing returns to scale.
See e.g. Gujarati, 1995.

shape of the production function and the joint distribution of the disturbance term. The method is sensitive to these choices, and the choices themselves are bound to remain uncertain. (Ruggiero, 1999; Simpson, 2009.)

Data envelopment analysis

The concept developed by Farrell (1957) for measuring productive efficiency determines the production possibility frontier for the DMUs using convex combinations of the observed input-output data for the DMUs (i.e. the empirical information available from the DMUs), and then measures the distance of a given unit from the frontier. In this sense, the idea is the same as in the Data Envelopment Analysis (DEA) developed subsequently by Charnes, Cooper and Rhodes (1978; 1981) and Banker, Charnes and Cooper (1984). (See Farrell, 1957, p. 254, pp. 256–259.)

The *Farrell efficiency* concept considers the distance from the frontier (and, correspondingly, the shift to the frontier of an inefficient DMU) radially and fails to take all of the inefficiencies into account. The *Pareto-Koopmans* efficiency concept corresponds to the idea of Farrell efficiency except for the requirement that there should be no opportunities to make input reductions (without simultaneous output reductions) or output increments (without simultaneous input increments) in the model. If by F we denote the set of Farrell efficient DMUs and by P–K the set of Pareto-Koopmans efficient DMUs, we know that P–K $\subseteq$ F. It is possible to differentiate between Farrell efficiency and Pareto-Koopmans efficiency in DEA with the help of the so-called *slack variables*. If, and only if, there is no positive slack, the DMU is Pareto-Koopmans efficient and thus also Farrell efficient. In case there is positive slack, the DMU is not Pareto-Koopmans efficient, but it can still be Farrell efficient with an efficiency score = 1. Inefficient units with an efficiency score < 1 are neither Farrell efficient nor Pareto-Koopmans efficient. (Charnes, Cooper and Rhodes, 1978; Charnes, Cooper and Rhodes, 1981; Lovell and Schmidt, 1988; Lovell, 1993.)

The idea of DEA corresponds to the original idea presented by Farrell (1957).

DEA is a non-parametric method of mathematical programming. It was originally developed to evaluate multi-input–multi-output non-profit organizations having no access to price information. DEA employs the linear convex combinations of the observed inputs and outputs of the DMUs to compute the production possibility frontier that envelops (closes in upon) all the DMUs. If a given DMU reaches the production possibility frontier, with an efficiency score = 1, it is reckoned among the efficient units. In case the DMU fails to reach the production possibility frontier, with an efficiency score < 1, the unit is said to be inefficient.

The DEA programs come in many forms. Research and development of DEA has been intense since the introduction of the method by Charnes, Cooper and Rhodes (1978; known as the *CCR model*) and Banker, Charnes and Cooper (1984; known as the *BCC model*). New ideas and program formulations are continuously presented by the operations research community, and also by scholars in the different fields of application of DEA.

We introduce the original program formulations presented by Charnes, Cooper and Rhodes (1978) and Banker, Charnes and Cooper (1984) (CCR, BCC) and two novel ideas that have been adopted in subsequent applications of DEA. Reference is made to the *super-efficiency* scores and to the analysis and elimination of the effects of *the factors of the operational environment on the efficiency scores of DMUs*, usually by the means of Tobit, Logit or OLS regressions.

The basic programming problem assumes either an *input-orientation or an output-orientation*, it may or may not incorporate a *variable returns to scale* component (this is the difference between the CCR and BCC models, with the latter, but not the former, offering the opportunity to depict variable returns to scale), and it can be expressed as a *primal or dual versions*; this then gives us eight different programs. We restrict our presentation to input-orientation problems that are common in law enforcement studies, and we settle for primal versions (dual program versions can be derived from the primal versions). This leaves us with a differentiation between the constant and variable returns to scale programs.

The programs (p.1–p.2) presented below exhibit two different input-orientation programs (primal versions). Program (p.2) includes the variable returns to scale component (c_0), which is lacking in program (p.1). The unity constraint [$\Sigma\, \omega x_{ro} = 1$] ensures that the solution is unique.

Taking a look at (p.1), the idea is to select weights for each individual DMU (DMU_0) so that the sum of its weighted output vector ($\Sigma\, \mu_k y_{k0}$, $k = 1,...,m$) is maximized, with the following constraints;

1. For the DMU_0 under scrutiny, the sum of its own weighted input vector equals one ($\Sigma\, \omega_r x_{ro} = 1$, $r = 1,...,s$);
2. For no DMU i ($i = 1,...,n$) in the data set, with the same set of weights, the sum of the weighted outputs ($\Sigma\, \mu_k y_{ki}$) exceeds the sum of the weighted inputs ($\Sigma\, \omega_r x_{ri}$), and that;
3. The weights (ω,μ) are non-negative throughout.

The program is solved for each individual DMU.[7] Note that, in (p.2), the variable returns to scale component is DMU-specific so that in the BCC model, it will be possible to say whether a given DMU operates at decreasing, constant, or increasing returns to scale.

If DMU_0 is found to be technically efficient, there are vectors of weights for the outputs and inputs such that $\Sigma\mu y_0 = \Sigma\omega x_0 = 1$, $\Sigma\mu y_i \leq \Sigma\omega x_i$, $\forall i$. If DMU_0 is found to be technically inefficient, then, *for all feasible vectors of weights*, there is a pair ($\Sigma\mu x^*, \Sigma\omega y^*$), which is formed as a linear convex combination of the other DMUs, such that, $\Sigma\mu y_0 < \Sigma\omega x_0 = 1$, $\Sigma\mu y^* = \Sigma\omega x^*$.

$$\max z_0 = \sum_{k=1}^{m} \mu_k y_{k0}$$

$$s.t.$$

$$\sum_{k=1}^{m} \mu_k y_{ki} - \sum_{r=1}^{s} \omega_r x_{ri} \leq 0, i = 1,...,n,$$

$$\sum_{r=1}^{s} \omega_r x_{r0} = 1,$$

(program p.1)

$$\omega_r, \mu_k \geq 0 \forall r, k.$$

$$\max z_0 = \sum_{k=1}^{m} \mu_k y_{k0} + c_0$$

$$s.t.$$

$$\sum_{k=1}^{m} \mu_k y_{ki} - \sum_{r=1}^{s} \omega_r x_{ri} + c_0 \leq 0, i = 1,...,n,$$

$$\sum_{r=1}^{s} \omega_r x_{r0} = 1,$$

$$\omega_r, \mu_k \geq 0 \forall r, k,$$

$$c_0 \text{ unrestricted.}$$

(program p.2)

The concept of *super-efficiency* was introduced in 1993 by Andersen and Petersen (1993). The idea is ingenious. It deals with the problem that there is no way of comparing the relative efficiencies of the units on the production possibility frontier to one another. For all of these DMUs, the efficiency score = 1. However, if we compute the frontier without DMU_i, it will become possible to measure the distance of DMU_i from this newly constructed frontier *from above the frontier*. The measure of this distance is the super-efficiency score of DMU_i.

Taking the effects of the factors of the operational environment on the efficiency scores of the DMUs into account is another new feature of contemporary DEA models in relation to earlier models. Most often, the Tobit regression model is used to explain the efficiency scores with the help of environmental variables (Tobit, because the response variable is censored). The second-stage regression results are informative in their own right, but, in addition to this, they can be employed for third-stage programming problems. In an innovative law enforcement application of DEA, Gorman and Ruggiero (2008) constructed a distinct harshness index (taking into account the fact that some of the DMUs operate in a costly or downright hostile environment), using the second-stage Tobit regression model, and then used this index for solving third-stage programming problems (DEA).

7   Taha (1989) provides clear guidance as to the practical solutions in operations research and mathematical programming with the SIMPLEX technique.

Law enforcement applications of DEA: the accumulated evidence

We already noted that DEA was developed to evaluate efficiency in multi-input–multi-output, non-profit organizations with imperfect access to price information. So, unlike many other methods of efficiency analysis, DEA is well suited to a situation in which the DMUs are multi-purpose organizations by their very nature and in which the output and outcome measures cannot be converted into a single, common scale of relative values. Accordingly, the method is not of partial variety of efficiency optimization,[8] but a comprehensive optimization method. This means that within the confines of its methodological limitations, DEA really is capable of differentiating between efficient and inefficient DMUs as comprehensive organizational units. The efficiencies of multi-input–multi-output DMUs will be objectively sorted out and the efficient units can be benchmarked for the benefit of the inefficient units.

There are other advantages to DEA in public sector evaluation in addition to the above mentioned key features. DEA is a data-oriented method of analysis in the sense that no *ex ante* assumptions need to be made as to the functional form of the production function. The data (the real input-output combinations) determine the shape and position of the production possibility frontier. DEA can be adapted for situations in which scale efficiency is not constant, but variable (decreasing returns to scale, increasing returns to scale). Another key advantage is the relatively low number of observations (DMUs) required by the DEA programs. It is significantly lower for non-parametric programming problems (computing) than for parametric estimation assignments (stochastic analysis). The number of DMUs should be $N \geq$ 3 x (the number of inputs + outputs) (Barros, 2006; 2007). Furthermore, DEA is liberal with respect to the strategic decisions that are made by the DMUs: the optimal frontier can be reached with very different input-output combinations. Due to the subsequent developments in operations research, super-efficiency scores can be computed for the DMUs (thus avoiding, at least in part, the censored nature of the distribution of efficiency scores), and indicators of the operational environment can be integrated into the DEA using two- or three-stage analysis.

In a sense then, DEA is an almost optimal tool for the research and development of efficiency in the public sector. But the method is not unproblematic. Applying the method to law enforcement organizations (police forces, police departments, police precincts), and interpreting the results and policy alternatives thereof, is a delicate matter. A good many hazards pertaining to misspecification, misinterpretation and distorted policy advice need to be fully recognized.

Some of the key strengths of DEA are related to these hazards. The fact that DEA is a data-oriented method of analysis means that it is sensitive to measurement errors, outlier observations and misspecifications of the production process (inputs, technology, outputs). Measurement errors, outlier idiosyncrasies and misspecifications in depicting the operation of the DMUs will have direct distorting effects on the production possibility frontier and thus on the efficiency scores of the DMUs.

Because of the liberal attitude towards the weighting of inputs and outputs by the DMUs, DEA is potentially a "Freak's charter", as noted by Johnes and Johnes (1995). Any choice as to the input-output combinations will do, from the methodological point of view. This can be expected to be a problem in public agencies with judicially fixed service obligations and end product line duties. Many services and product lines are strictly and exclusively unprofitable from the viewpoint of private producers. They need to be taken care of by public service providers. Yet, technically, strict specialization by the DMU to

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8   With the notion of "partial efficiency measures" Simpson (2009, p. 266) refers to techniques aimed at estimating the efficiency of production of a single output in organizations producing multiple outputs. The advantages are clear enough; there is no need to aggregate outputs, and, thus, no need to acquiring output prices. The disadvantages involve isolating the particular inputs contributing to the output in question. Also, this may result in perverse incentives, if the policy evaluation is not balanced with respect to the different societal objectives of the public organization. (Simpson, 2009, pp. 266–267.)

some distinct output(s) suffices to make the unit efficient in DEA, even if its production of some other outputs would be weak. But, at the same time, these other outputs, neglected by efficient DMUs, may be of vital importance for the citizenry. Input and output employment restrictions are possible in DEA, but the restrictions and restriction thresholds themselves are not free from arbitrariness.

These are well-known problems of DEA, but not necessarily all there is to the limitations of DEA. According to Diez-Ticio and Mancebon (2002, p. 352), selecting the correct variables for a DEA application,

"(…) requires a complete knowledge of the activity being carried out by the organizations under evaluation, that is to say, of all their outputs and inputs and of the relationship that links them. This is difficult to achieve when the estimations refer to organizations that provide public services, because in the majority of cases the production process is itself difficult to clarify.

Against this background, the possibility of achieving a conceptual specification of the production process that can be regarded as generally valid for all the institutions involved in the activity being studied is clearly remote."

Diez-Ticio and Mancebon (2002, pp. 360-361) returned to the themata before concluding their paper, and noted that because there are several effective factors that are difficult to quantify, for example, "the expertise of the officers, luck, the management of human teams," it is very difficult to sort out the factors that actually explain the differences in the efficiency scores between the different DMUs.

Difficulties in trying to describe the different contributing components of the production process may be related (as a cause) to another probable limitation of DEA applied to public sector organizations. Simpson (2009), in her paper on *Productivity in Public Services*, provided a methodologically robust review of parametric and non-parametric methods of efficiency analysis. In the latter part of her paper she went on to note, in passing, that,

"Studies that only measure producti-vity growth or make efficiency comparisons across organizations sometimes shed little light on what drives changes or differences in productivity." (Simpson, 2009, p. 267.)

With our own experience of DEA our intimation was that this – shedding sometimes "little light on what drives (…) differences in productivity" – is not necessarily a coincidental characteristic of efficiency analyses in general and DEA in particular. It appears to be a constant, empirically regular finding. But, if this is the case, it is a strange finding. After all, aren't *improvements in productivity* all that there is to *efficiency analysis*?

To take a closer look at this issue, we conducted a systematic review of law enforcement applications of DEA. What kinds of real input and output variables are used in law enforcement applications of DEA? What kinds of methods are in use, and how do the methods and interpretative accounts thereof reflect the well-known limitations of DEA? Most importantly, what is the actual, practical value of law enforcement applications of DEA? Are improvements in productivity theoretically feasible and empirically clear and concrete, when using efficiency analysis in the form of DEA?

We conducted a systematic search for law enforcement applications of DEA. We used nine key search terms: efficiency analysis, efficiency, productivity, DEA and Data Envelopment Analysis (combined with) police, law enforcement, crime, and criminal. We relied upon *Ebscohost Academic Elite*, *Sage*, *Elsevier*, *Ingenta Connect*, and *JSTOR* article data bases and were able to find 19 articles that appeared to correspond to our search target. Unfortunately, we could not locate a copy of one of the papers that we felt hit the target.[9]

We took a particularly close look at the *inputs*, *outputs* and *methods* used in the studies in reading the papers through. We also considered in each separate case the key *conclusions* and *suggestions for improvements in productivity* made by the authors. Table 1 gives the core results of the exercise.

9   Nyhan, R.C. & Martin, L.M. 1999. "Assessing the Performance of Municipal Police Service Using Data Envelopment Analysis: An Exploratory Study." State and Local Government Review, 31, 1999, 18–30. Reference here from Drake & Simper, 2005a, p. 482.

Table 1: DEA in Law Enforcement: inputs, outputs, methods, key conclusions and suggestions for improvements in productivity (based on 18 research papers)

Research paper Inputs	Outputs	Methods	Conclusions Suggestions for improvements in productivity
Thanassoulis, 1995			
Officers Violent crimes Burglaries Other crimes	Violent crime clear-ups Burglary clear-ups Other crime clear-ups	DEA	Efficiency ranks and scores for 41 police forces in England and Wales; identification of the best practice DMUs, but not benchmarking the set of efficient DMUs, as the forces in the study remained anonymous. Qualified estimation of the target crime levels for the DMUs, i.e. levels that would result in DMUs being efficient. Grouping of police forces based on socio-economic indicators, and searching for efficient performers within the groups.
Carrington et al., 1997			
Police officers Civilian employees Police cars	Recorded offences that police responded to Number of arrests Summons served Attending major car accidents Kilometres by police car	DEA Tobit model	Efficiency scores for 163 police patrols, New South Wales police service, in Australia. Reporting was based on efficiency score means and distributions, not on patrol-specific efficiency scores. Qualified suggestions for potential reductions in the use of inputs. No outputs were included in the models for civilian labor inputs. Patrolling on foot was not taken into account in metropolitan areas, and, as noted by Carrington and others, efficiency considerations differ from effectiveness. With Tobit regression, indicators of the operational environment were found to be statistically insignificant.
Drake and Simper, 2000			
Total labor costs Premises-related expenses Transport-related expenses Capital and other costs	Clearance rate The number of traffic offences dealt with (prosecutions, written warnings, fines) The number of breathalyzer tests	DEA MDA ANOVA	Efficiency ranks and scores for 43 English and Welsh police forces; identification of the best practice DMUs, benchmarking the set of efficient DMUs. Results from both DEA and MDA + ANOVA models point towards the conclusion that scale efficiency is best in the medium-sized police forces, based on the criterion of staff size. Furthermore, the DEA but not the MDA + ANOVA models indicate that pure technical efficiency or PTE is better (and X-inefficiency is greater) when the police force is smaller (larger). The MDA + ANOVA models suggest that these findings may result from outlier observations, and that PTE is better in the smallest and in the largest police forces, compared to the police forces of intermediate size.

Diez-Ticio and Mancebon, 2002			
The number of police officers per 100.000 inhabitants The number of police vehicles per 100.000 inhabitants The inverse of the population size as an environmental indicator	Property crime clearance rate Violent crime clearance rate	DEA TMM (Tsai–Mar Molinero-model)	Efficiency ranks and scores for 47 Spanish police service units (Cuerpo Nacional de Policia, SCNP), identification of the best practice DMUs, benchmarking the set of efficient DMUs.

Differentiation between overall efficiency and function-specific efficiency scores. Technologies cannot be expected to be the similar across the different functions in police organizations. By implication, they should be given differentiated treatment in analysis. |
| Sun, 2002 | | | |
| Number of police officers Number of burglaries recorded Number of offence crimes recorded Number of other crimes recorded | Number of burglary clear-ups Number of offence crime clear-ups Number of other crimes clear-ups | DEA OLS regression | Efficiency ranks and scores for 14 police precincts, in Taipei city, Taiwan, from 1994 to 1996, with window analysis (42 or 3 x 14 observations). Identification of the best practice DMUs, benchmarking the set of efficient DMUs.

Qualified suggestions for adjusting the levels of inputs and outputs and the general scale of activity (based on information on increasing, constant, or decreasing returns to scale); target-level calculations.

Indicators of the operational environment were found to be statistically insignificant in multiple regressions that the authors used to explain the efficiency scores. |
| Drake and Simper, 2003 | | | |
| Total employment costs (labor) Capital expenses (capital) Transport costs (vehicles) | Total number of cleared up crimes The number of cleared up violent crimes The number of cleared up burglaries The number of breathalyzer tests | SIDF DEA SDEA FDH Tobit model | The SIDF and DEA models appear to give different efficiency scores in the sense that the difference between the scores proved to be statistically significant. Rank correlations between the results from the different models were relatively high, though, especially for the SIDF and DEA models.

Efficiency ranks and scores for 42 English and Welsh police forces; qualified suggestions for input reductions; identification of the best practice DMUs; an attempt at efficiency grouping of police forces.
There are several demographic and geographic factors that exercise an effect on the efficiency scores; the external factors ought to be taken into account. |

Drake and Simper, 2004			
Total employment costs, staff (labor) Capital + other costs (capital) Transport costs	The number of complaints per officer Average number of days lost due to absenteeism per officer The number of crimes solved The number of emergency calls to stations answered within the target time The number of breathalyzer tests	DEA	Efficiency ranks and scores for 41 English and Welsh police forces; technical and allocative efficiency; identification of the best practice DMUs; findings according to which smaller units (i.e. smaller police forces) are more efficient than larger units. The result was reinforced when using weight restrictions in the model; the efficiency of the smallest units did not result from specialization, i.e. they remained the most efficient when imposing minimum output weight restrictions. Allocative efficiency was found to be related to external factors, the demographics of the police district and the size of the police force; in addition to allocative efficiency, scale efficiency differs with the size of the police force.
Drake and Simper, 2005a			
Number of burglaries Number of vehicle crimes Number of robberies + Net budget revenue (Model 2)	Offences cleared Days lost due to sickness	DEA Tobit model	Efficiency ranks and scores for 41 English and Welsh police forces, taking into account factors of the operational environment and of input cost information as a part of the model. Second-stage Tobit regressions with survey-based indicator variables (fear of crime, citizen focus) as response variables, and environmental variables and PTEs as stimulus variables. The article warns against using the survey-based indicators characteristic of the performance radar of the Home Office and also against using the performance indicators restricted to outputs and outcomes. The use of costs on the input side and also of factors of the operational environment turned out to be important from the point of view of the performance of the DMUs. Interestingly, fear of crime is unaffected by PTE scores but dependent on socioeconomic factors.
Drake and Simper, 2005b			
Violent crimes against persons Sexual offences Robbery Burglary (dwellings) Theft of motor vehicles Theft from a vehicle	Clearance rates: Violent crimes against persons Sexual offences Robbery Burglary (dwellings) Theft of motor vehicles Theft from a vehicle	DEA SODF	Efficiency analysis of 293 Basic Command Units (BCU) in the police forces of England and Wales. Identification of 20 best and worst practices DMUs, benchmarking a part of the set of efficient DMUs. There is variance in the BCU efficiency scores between the different police forces but also within the police forces. Drake and Simper conclude that knowledge concerning the best practices could be shared even within the forces. Results from the DEA and SODF models show tolerable correlation (Spearman, .54). Scale efficiency results suggest, according to the authors, that the relationship between crime and crime clearance rates is nonlinear. (Resources needed / crime cleared) were found to be higher in large DMUs than in small DMUs. The majority of BCUs (192/293) operate at decreasing returns to scale.

Barros, 2006			
Number of police officers Costs of labor Cars Other costs Thefts Burglaries Car robberies Drug related crimes	Clearance rate, thefts and burglaries Clearance rate, car robberies Clearance rate, drug-related crimes Search operations Traffic-stop operations Minor offences with fines	DEA Malmquist index	Efficiency ranks and scores with Malmquist index decomposition for 33 Lisbon Public Security Police (Policia de Seguranca Publica) precincts (DMUs), in Portugal, the panel data were from 2000, 2001 and 2002; identification of the best practice DMUs, benchmarking the set of efficient DMUs. It was found that efficiency (total, all components included) increased in 30/33 DMUs over the time period (2000-2002). For 22/33 units, the best productivity frontier itself experienced a positive shift, i.e. was pushed outward.
Verma and Gavirneni, 2006			
Total expenditure Number of police officers Number of investigating officers Number of investigated cases	Number of people arrested Number of persons charge-sheeted Number of persons convicted Number of trials completed	DEA SDEA	Efficiency ranks, efficiency scores and super-efficiency scores for 25 different state police units, in India; identification of best practice DMUs, benchmarking the set of efficient DMUs. Qualified suggestions for input and output adjustments, with target levels for the different DMUs. On the basis of the core results, and on the results on returns to scale in different states, it appeared that efficiency was not dependent on the size of the state.
Barros, 2007			
Number of police officers Cost of labor Cars Other costs Factors of the operational environment: Number of immigrants in the precinct Percentage of unemployed persons in the precinct Slums in the area of the precinct (dummy) Run-down districts (dummy)	Clearance rate, theft and burglary (%) Clearance rate, stolen cars (%) Clearance rate, drug crimes (%) Number of raids Number of stop operations Number of minor offences with fines	DEA Tobit model	Efficiency ranks and efficiency scores for 33 Lisbon police force precincts; identification of the best practice DMUs, benchmarking the set of efficient DMUs. The Tobit model revealed that crime is dependent on poverty indicators, namely the number of immigrants in the precinct, the percentage of unemployed persons in the precinct and slums in the area of the precinct (dummy). Hence, according to Barros, security policies should be combined with social policies when trying to efficiently combat crime. The conclusions were carefully qualified, throughout.

Garcia-San-chez, 2007			
Crimes Misdemean-ours	Intermediate outputs, used as inputs in a model of coer-cive function: Crimes solved Misdemeanours solved Outputs: Number of indi-viduals arrested for crimes Number of indi-viduals arrested for misdemean-ours	DEA Logistic regres-sion	Efficiency ranks and scores for 52 national police forces in provincial capitals, in Spain; identification of best practice DMUs; benchmarking the set of efficient DMUs; with no straightforward suggestions as to input or output adjust-ments. It was observed in the second-stage logistic regressions that crime categories have different kinds of effects on the effectiveness of the investigation (producing intermediate outputs), on the one hand, and on coercive effectiveness, on the other hand (producing outputs).
Gorman and Ruggiero, 2008			
Sworn officers Other emplo-yees Vehicles Factors of operational environment: Single mot-hers (%) Population (millions) Poverty (%) Population / miles^2 Labor force (%)	Inverse of mur-ders per popula-tion Inverse of other violent crimes per population Inverse of property crimes (total)	DEA Tobit model OLS	Efficiency ranks and scores for 49 US state police forces; the authors conducted first-stage ordinary DEA, then used second-stage OLS and also alternative Tobit regressions to account for the factors of the operational environment, and finally incorporated the resulting Harshness estimate from the second-stage estimates to the final, third-stage DEA. Population and population density were taken into account as factors of the operational environment. Yet the authors also found in the final model that the inefficient state police forces were from states with large landmass and relatively few major cities. The majority of inefficient states operated in the domain of increasing returns to scale (with two excep-tions). Overall, technical efficiency scores were 94 on aver-age, with 34 efficient state police forces. The authors suggest that there are opportunities for making input adjustments, and thus cost reductions, but remain careful in view of policy advice.

Wu et al., 2010			
Labor cost General running and operating costs Equipment purchasing costs Factors of operational environment: The Number of public housing units Population Population / km² Unemployed residents (%) Level of education Household revenue (yearly, average)	Number of cleared up burglaries Number of cleared up violent crimes Number of other crimes cleared up Inverse of the number of road traffic accidents (not included in the final model, NI) Number of general and special services (e.g. emergency calls) Residents' level of satisfaction with public security (NI)	DEA SDEA OLS	Efficiency ranks, efficiency scores and super-efficiency scores for 22 police districts in Taiwan (county, city); identification of the best productivity practice DMUs. The majority of inefficient DMUs operated at increasing returns to scale. In addition to referring to opportunities for general scaling the production up or down, the authors referred to opportunities for making input adjustments (Taipei city district). There were no significant differences between the efficiency scores of metropolitan (city) vs. county districts. Restricting the weights in the model had a relatively large impact on the efficiency scores of many districts. Wu et al. employed a three-stage procedure in the vein of Gorman and Ruggiero (2008). They noticed – when using the OLS regression, and having calculated the Cost Index (third-stage, adjusted efficiency scores / original scores) – that factors of the operational environment were not statistically significant. The authors were careful in view of policy advice; they identified potential sources of distorted results, the most important of these probably being that there may be negative correlations between inputs and outputs, which corrupt the analysis (this was the reason for their abandoning two output variables from analysis).
Akdogan, 2012			
Personnel Police vehicles The population of the precinct The area of the precinct (m²) The number of critical entities – hospitals, schools etc. in the precinct The number of incoming judicial and managerial documents The number of critical incidents in the precinct	The number of processed judicial and managerial documents The number of outgoing documents The number of solved incidents	DEA	Efficiency ranks and scores for 19 police stations in Ankara, Turkey; suggestions for input readjustments in inefficient police stations; identification of the best practice DMUs, benchmarking the set of efficient DMUs.

Asmild et al., 2012			
Personnel, measured in full-time equivalents (FTE)	M1 (enforcement model): the number of arrests, the number of other worked cases, clearance rate M2 (response to emergency model): the percentage of time available, the number of calls answered, the inverse of the response time M3 (crime prevention model):the percentage of time on patrol, the number of times people are stopped and interviewed	DEA SDEA	Efficiency ranks and scores for 16 anonymous DMUs in three different models; identification of the best practice DMUs for all three models; two DMUs were efficient in all three models. Suggestions for the reallocation of inputs by increasing the inputs in efficient DMUs so as to ease up the work load in these units and, by the same token, to shift the best productivity frontier in order to reduce inefficiency in other DMUs, and by reducing inputs from inefficient units, so as to push these units to the production possibility frontier. Scenarios for different alternative types of reallocations, 1. within functions, between units; 2. between functions, within units, 3. between functions, between units.
Aristovnik et al, 2013			
M1: number of criminal offences M2: number of violations of public order regulations M3: number of violations detected in road traffic controls	M1: number of investigative and other measures taken - crime scene inspections Number of investigative and other measures taken - house searches M2: police measures against offenders - number of persons held in custody Police measures against offenders - number of ordered productions M3: number of police measures in traffic controls - Alcohol examinations Number of police measures in traffic controls - Temporary confiscation of driving license	DEA Tobit model	Efficiency ranks and scores for 11 police directorates in Slovenia; identification of the best productivity DMUs, benchmarking the set of efficient DMUs. Qualified suggestions for input and output adjustments, with target levels. Non-discretionary factors (i.e. factors not under the control of the PD) were included in the three-stage DEA + Tobit regression models, in addition to the discretionary inputs. SIDF ~ Stochastic Input Distance Frontier SODF ~ Stochastic Output Distance Frontier DEA ~ Data Envelopment Analysis SDEA ~ Super-Efficiency DEA FDH ~ Free Disposal Hull Approach TMM ~ Tsai–Mar Molinero -model MDA ~ Multiple Discriminant Analysis

Inputs, outputs and methods

DEA programs in law enforcement are characterized by two distinct core structures. The first is a type in which inputs are simply the factors of production that an organization actually uses (the number of police officers, the number of vehicles, other capital machinery or capital costs, etc.) and outputs are the end products or services that are supposed have value for the larger society (the different kinds of operations being conducted, the general clearance rates or clear-ups according to crime category, and different kinds of measures of citizen satisfaction). The second structural solution is entirely different. Different kinds of crimes (by crime category) are depicted as inputs, while clear-ups (by crime category) are depicted as outputs. The ratio of studies focusing on the first type of structure compared to the latter type of structure is approximately 10 to 8, depending on the interpretation – some of the cases are hybrids.

Labor (the number of police officers, personnel, total labor costs, employment costs or a corresponding variable) is used as an input in 14/18 studies. Capital (vehicles, transport costs, premises-related costs, capital costs) is used as an input in 10/18 studies. When looking at clearance rates by crime category, the most common category is the general clearance rate (all crimes), followed by clearance rates for burglaries, violent crimes, thefts, minor offences, property crimes, robberies, drug-related crimes, sexual crimes, and murders. The outputs of traffic enforcement are often captured with the help of operations-based measures, such as breathalyzer tests. Maintaining public law and order (alarm, patrol and surveillance functions) is reflected in measures such as the number of emergency calls that are responded to or the response times.

There is a clear tendency for comprehensive optimization. In one form or another, the studies try to cover both labor and capital inputs in the structure of the programs, while on the output side they usually model the different functions of policing from crime investigation to law and order maintenance and traffic enforcement. However, on closer inspection, no two studies or programs are exactly alike in their choice of inputs and outputs.

Methodologically, there is slightly less variance between the different studies. Some of the studies are based only on DEA. Some of them make use of *stochastic frontier analyses*, along with DEA, and strive to analyze whether or not the efficiency scores from the different types of analyses cohere. This for the most part appears to be the case, but there is no full correspondence between the results from the different models. There is a case for using both parametric and non-parametric methods of analysis in efficiency studies. *Second-stage Tobit, Logit or OLS regressions* are used in half of the studies and *SDEA* with *super-efficiency scores* is used in four different studies. Barros (2006) uses of the *Malmquist index technique*, which makes it possible to analyze the shift in the production possibility frontier over time.

Two studies deserve to be mentioned with respect to the second-stage modeling. We already noted that the study by Gorman and Ruggiero (2008) was methodologically sophisticated in trying to sort out the effects of the factors of the operational environment on efficiency scores. The second paper that needs to be mentioned in this respect is the study by Barros (2007). The second-stage Tobit regression model by Barros revealed that crime was dependent on a few key poverty indicators: the number of immigrants in the precinct, the percentage of unemployed persons in the precinct and the presence of slums in the area of the precinct (dummy). Hence, according to Barros, security policies should be combined with social policies when trying to efficiently combat crime.

Differences in efficiency scores, improvements in productivity

DEA allows for a specific mode of efficiency reporting. It yields *efficiency scores* and *efficiency ranks* for the individual DMUs. On the basis of the efficiency scores, DEA can be used as a means of *identifying the best productivity DMUs*, which, for their part, can be used as *benchmarks* by the inefficient units.

Practically all of the papers reviewed in this study report these core computing

results. However, some of the papers depict the DMUs in a way that leaves them anonymous and refrain from engaging in a benchmarking exercise (Thanassoulis, 1995; Carrington et al., 1997; Asmild et al., 2012). Carrington et al. (1997) did not report the police patrol -specific efficiency scores (these were the 163 DMUs in their study), but settled for reporting the efficiency score means and distributions of the DMUs. Drake and Simper (2005b) reported the top and bottom performers (20 each), after having analyzed the efficiency of 293 Basic Command Units (the DMUs in their study).

DEA also makes it possible to compute DMU-specific *target input (or output) levels* for the inefficient units. This is the reduced level of input (the increased level of output), which the DMU needs to attain in order to reach the efficiency frontier. Having computed the target levels, the analyst may or may not give voice to DMU-specific *input or output adjustments*.

In most cases, the potential suggestions for input reductions or output increments are carefully qualified by the authors. Carrington et al. (1997), for example, as well as Barros (2006; 2007), Verma and Gavirneni (2006), Gorman and Ruggiero (2008) and Asmild et al. (2012) all point out, in one form or another, that they probably have not given an exhaustive account of the production function (technology) of the DMUs under scrutiny. Carrington et al. (1997) note that, even if there would appear to be room for input reductions on the basis of their computing results, the results themselves are constrained by the incompleteness of the programs. No outputs were included in the models for the civilian labor inputs, and patrolling on foot was not taken into account in metropolitan areas. And, as further noted by Carrington and others, *efficiency* considerations will always be different from an evaluation of *effectiveness*.

Nevertheless, in some of the studies suggestions for input or output adjustments are, if not entirely unqualified, still rather straightforward. This is not necessarily a problem if the validity of the program model is good, but if there are problems with the validity of the model, then giving straightforward, computing-based

suggestions for input or output adjustments runs the risk of resulting in seriously flawed policy advice. We will come back to this issue in a short while.

Many studies also report the domain of *the returns to scale* at which the individual DMUs operate and *whether or not the size of the DMU affects its efficiency score* (in terms of pure technical efficiency, or PTE). Surprisingly perhaps, there are several law enforcement agencies, at least in the context of the English and Welsh police forces, which operate at decreasing returns to scale. The impression based on several distinct studies conducted by Drake and Simper is that while large, metropolitan DMUs suffer from organizational inefficiency, or the so-called *X-inefficiency*, small and medium-sized DMUs are technically efficient (Drake and Simper, 2000; 2004; 2005b; cf. Verma and Gavirneni, 2006; Gorman and Ruggiero, 2008).

As yet another important finding, having imposed minimum output weight restrictions for their programming problems, Drake and Simper (2004) found that the regularity – suggesting that the relatively small police forces were technically efficient – did not result from specialization. If anything, the original findings were reinforced when the authors introduced the minimum output weight restrictions.

According to Drake and Simper (2005b), the relationship between crime and crime clearance rates is nonlinear. In practice, when analyzing 293 Basic Command Units in England and Wales, they observed that the ratio of *Resources needed / Crime cleared* was higher in the relatively large DMUs than in the relatively small DMUs.

Relying on the *Malmquist Index* technique, Barros (2006) came across a rather interesting finding with respect to the development of the production possibility frontier over time. There was a positive shift in the production possibility frontier between 2000 and 2002 in the precincts of the Lisbon Public Security Police. That is to say, the frontier itself was pushed outwards by what appeared to be genuine *technological progress*.

Second-stage analysis, which aims to sort out the effects of the factors of the operational environment on the ef-

ficiency scores of the DMUs, is part and parcel of DEA nowadays. Yet it appears that the models and measures in use when trying to estimate these effects have evaded standardization. Tobit, logit, and OLS-regression techniques are used in second-stage analyses. In some cases, the results from these analyses are used in third-stage DEA computations (a good example is the harshness index developed by Gorman and Ruggiero, 2008). The variety in the *measures* that have been used is even wider, ranging from metropolitan and county district differentiation to land area (km^2), population, population density and various socio-demographic factors of the operational environment, such as unemployment, poverty, immigrant population share, slum districts and other factors making the operational environment potentially harsh for the police force. Given the wide variety of models and measures, conflicting results are to be expected and have actually been observed. Having said that, our educated guess is that leaving the operational environment indicators out of the picture severely distorts the efficiency scores of law enforcement DMUs (Drake and Simper, 2003; 2004; 2005a; Barros, 2007; Gorman and Ruggiero, 2008; cf. Carrington et al., 1995; Sun, 2002; Wu et al., 2010).

DEA sunny side down

DEA certainly accomplishes a great deal if we compare the method to other, alternative methods of efficiency analysis in the public sector. Yet if we ask the questions we had in mind before going into our review of DEA applications in law enforcement – about concrete opportunities for improving productivity – the answer we are about to give is a bit disappointing. The opportunities for improving productivity that the law enforcement applications of DEA give rise to are not very practicable. They are tractable, for sure, but of little concrete help from the point of view of day-to-day management.

Suppose there is a case in which a particular DEA application has been capable of pointing out the best productivity units lying on the production possibility frontier and differentiating between these and other DMUs. Assume, furthermore, that the efficiency scores obtained with the help of the method are valid in the sense that the DMUs on the frontier really are efficient, whereas the other DMUs are not. The next question is: How would it then be possible to actually accomplish the required input reductions, or, better still, output increments, in order to reach the efficiency frontier? What particular features of the efficient DMUs should the inefficient DMUs emulate?

In reality, there are numerous differences to choose from with respect to the different DMUs: differences in strategic choices and weights between the units; differences in the actual policing techniques and tactics in use; different hardware, software and wetware solutions arrived at when organizing the production process; differences in the HR procedures of the units (recruitment, coaching, payment and other motivation policies); and probably also several different mediators and intermediate outputs necessary for the production process. The factors of the operational environment most likely also affect the DMUs and the efficiency scores thereof, and ought to be understood and taken into account by managers and evaluators. Detailed computations of inefficiencies for the different functions of the different DMUs, in the vein of Asmild et al. (2012), may be of some real help, but these particular kinds of computations still remain at essentially the same, aggregate level of analysis as the standard DEA. What they give is information on input or output adjustments for the different functions of the different units.

We noted earlier that DEA appears to be incapable of penetrating the black box of technology and promised to come back to the proposition after having taken a look at DEA applied to law enforcement. As we see it, there are three points that need to be made when trying to understand this particular limitation of DEA.

1. First, we wish to note the trivial fact that *the technology* in DEA is a formal projection from inputs *x* to outputs *y*. Technology is the function that transforms inputs into outputs, f: $x \rightarrow y$, or $y = f(x)$. In practice, technology is a deterministic or

stochastic function on a plane or in a multidimensional space of real numbers.

2. Second, as another trivial fact, *the inputs* and *outputs* of the DMUs are depicted as relatively rough, aggregate quantities (labor, labor costs, vehicles, vehicle costs, capital equipment, capital costs; clearance rates for different crime categories, response times, breathalyzer tests). No detailed descriptions whatsoever of other aspects of the production process are included in the models.

Taken together, these two regular practices mean that technology tends to be described as *a formal projection from rough, aggregate inputs to equally rough, aggregate outputs*.

3. This does not necessarily matter too much in the manufacturing industries, where the bulk of knowing that is of relevance from the point of view of production is *explicit* and even *standardized, publicly available* engineering knowledge – save perhaps for the very latest innovations at the high end of the productivity scale, where part of the innovations are not yet publicly available, but are privately owned asymmetric advantages or have patent protection. But even these innovations are explicit knowledge in the sense that they can be depicted in the form of standardized engineering knowledge. The innovation-imitation cycle between the Western political economies and the Asian tiger economies goes far to demonstrate that in the manufacturing industries, opportunities for process and product improvements based on imitating the industrial leaders are very real.

Where the abstract description of technology does matter, however, are industries in which

1. The composition of the input vector is labor-intensive, and in which;
2. The contribution of the labor input to the production process and to the end products cannot be easily mechanized (conceptualized, codified, replaced by machine substitutes).

The case is clear enough with respect to the first part of the proposition. In Finland, which does not constitute an exception in an international comparative perspective (see, e.g., the statistics by HMIC in the UK), about 4/5, or 80 %, of the policing budget goes to personnel costs. Law enforcement is clearly a labor-intensive sector of the economy.

As to the second part of the proposition, we believe that this also might be the case in law enforcement. *It is not only that law enforcement probably suffers from the so-called cost disease*, which is one of the key theoretical embodiments of the two propositions (see van Reenen, 1999, for a discussion of cost disease in police organizations; see Baumol and Bowen, 1966; Baumol, 1967; and Baumol et al., 1985, for a theoretical discussion of cost disease). *We also have some good scholarly reasons to believe that experience is one of the sine qua non components of learning in police education and police work*. But if learning mainly comes about by doing, then the very core input in law enforcement – human knowledge – is embodied in individual human beings and embedded in unique patterns of human interaction.

Copying knowledge to enhance productive efficiency is not easy, if possible at all, if the factors of the operational procedures within organizations are, to a significant degree, idiographic: based on experience, embodied in individual human beings, and embedded in unique patterns of interaction between individuals. If and in so far as this is the case, there are no standardized, publicly available blueprints for the production technology. The same difficulties apply to the conceptualization and operationalization of technology in the first place: to understand what is actually going on in the production process is a demanding task and requires considerable time and effort on the part of employees, not to speak of what it requires on the part of managers and evaluators.

There is a great difference, then, in this respect between manufacturing industries and labor-intensive public services. In manufacturing industries, we often know quite a bit, if not everything, about the contents of the black box of technology – about the machinery, equipment, software solutions and other engineering solutions – because of exact documentation. In labor-intensive services, technology is rarely explicit and publicly available,

or it is explicit and publicly available to a much lesser degree than in manufacturing industries. It is not sold in well-packaged, wholesale hardware, software or other engineering solutions. Benchmarking and analytical and empirical description of the production function are not trivial problems in the manufacturing industries: far from it. But we believe that there is a significant difference in this respect between manufacturing industries and labor-intensive services industries.

DEA and misspecification of the production function

To repeat, DEA does not allow for misspecification of the production function. It is sensitive to misspecifications, measurement errors, and outlier observations, and it severely punishes the analyst who makes these mistakes. This is because any deviations from the best productivity frontier – based on the measurement of the actual input-output combinations of the observed DMUs – receive an inefficiency interpretation.

Suppose that the target levels given to inefficient DMUs are based on a mistaken specification of the production function. If in this case the levels of inputs are reduced to the target levels, then *there is no rational reason to believe that the inefficient DMUs will end up on the production possibility frontier*. It is quite possible that the distance will become greater than what it was before the managerial moves. This is because there are factors of the operational procedures – and probably also factors of the operational environment – that contribute to the production process in the DMUs, but are not included in the model. Inputs in an inefficient DMU are reduced to the level of inputs for an efficient DMU *as if* they were similar in other respects, i.e. in view of within-organizational factors of the operational procedures and factors of operational environment. But they cannot be expected to be similar in other respects.

DEA and decisions on allocation

The last of the limitations of DEA that we

mention here is but a reminder. It is necessary to be aware of the fact that decisions on allocation (proper) cannot be based on the results of data envelopment analysis.

The output weights incorporated within DEA do not reflect, have never been meant to reflect, and, indeed, cannot reflect (except by immense coincidence) the marginal social benefits associated with the outputs. From the point of view of the relative values of the outputs the output weights incorporated within the linear programming solutions of DEA are arbitrary. Questions such as how much, exactly, should we put effort into producing output y_1, compared to outputs y_2 and y_3, cannot get their answer from DEA, not at least if the weighting is supposed to be based on the full benefits that citizens actually reap from the outputs in relation to the other outputs produced by private and public organizations.

Conclusion

This article brought forth a theoretically oriented review and critique of efficiency analyses conducted in the field of law enforcement. The focus was on Data Envelopment Analysis (DEA). DEA is a well-established, non-parametric method of efficiency analysis that has gained widespread popularity in police studies since the mid-1990s.

We briefly introduced the method in this paper and then proceeded to review 18 different studies that have applied DEA to law enforcement. In practice, we took a look at the inputs, outputs and methods that have been used in the analyses. We also screened the advantages and disadvantages of DEA.

There are clear advantages to DEA. The analyst comes to grips with

- *Efficiency scores*,
- *Efficiency ranks*,
- *Best productivity status*, and
- *Scale efficiencies* of the individual DMUs, and is capable of identifying
- *Benchmark DMUs* and
- *Input and output target levels*, for the benefit of the inefficient units.

It is also possible to compute *super-efficiency scores* for the DMUs that have reached the production possibility frontier and to proceed to second-stage analysis with the help of Tobit, logit or OLS regressions, in order to sort out *the effects of the factors of the operational environment on the efficiency scores of the DMUs*.

However, DEA is not unproblematic. In addition to the established problems of DEA, which previous studies have called much attention to, reference was made to three further limitations of the method. It was argued that *DEA is incapable of penetrating the black box of technology* and that this is a particularly severe problem in the case of DEA because the method brutally punishes the analyst for any *misspecification of the production function*. It was also noted that *DEA can give no advice as to the decisions on allocation*. No information whatsoever on the marginal social benefits can be obtained with the help of the method.

How should we proceed with attempts at improving productivity? Are there alternatives to DEA?

To our mind, the weaknesses of DEA are diametrically opposed to the strengths of scholarly effectiveness analysis – and probably also vice versa, as there are no ideal, perfect methods of evaluation. Scholarly effectiveness analysis operates inside the black box that DEA crashes into. It relies on sharing knowledge and experience with practitioners, and it takes small but persistent scientific steps towards the ultimate goal: detailed understanding of the production process. The contribution of labor input on the one hand, and technological details on the other hand, are at center stage.

To opt for scholarly effectiveness analysis is to bet on a slow horse. This will also affect management, including the totality of New Public Management, because it is not a comprehensive but a partial approach to optimization. The more that street-level knowers are involved in the endeavor of improving productivity, the less the endeavor itself will have to do with comprehensive optimization, benchmark-oriented efficiency analysis and performance management in the vein of DEA.

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3   A KIND OF BLUE: POLICE OFFICERS' VIEWS OF TV CRIME DRAMA

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Introduction

The Criminal Justice System (CJS) is a part of society that is both familiar and hidden. It is familiar in that a large part of daily news and television drama is devoted to it. It is hidden in the sense that, for the majority of the population, they have little, if any, direct contact with the CJS. Skolnick (1966) argues that the police as an organisation are the most hidden part of the CJS.

A cursory glance at the TV schedules shows that crime drama, closely followed by hospital based series, is the most popular but also the most enduring form. As Reiner (2003) notes the debate about the relationship between the media, policing and crime has been a key feature of wider societal concerns about crime since the establishment of the modern police force. He outlines recurring themes in post-war debates in this field. For Conservatives, there has been an ongoing concern that the media is crimongenic as it serves to undermine traditional institutions including the police. From the viewpoint of radical criminology, the impact of the media is twofold. It exaggerates legitimate concerns about crime and emphasises the bureaucratic and other restrictions under which, the police operate. This is seen as undermining due process and legitimatising what be termed a *"maverick"* approach to policing. This can be seen in Clint Eastwood's *Dirty Harry* movies where Harry Callaghan acts as a one man law enforcement system outside of the formal legal process, which is portrayed as a corrupt

inefficient and too concerned with offenders' rights rather than protecting victims.

From a police perspective, Reiner notes that TV drama creates an expectation that *"crimes can be cleared up routinely in half an hour minus commercial breaks".* This article will discuss the findings of a pilot study, which sought to explore the attitudes of retired police officers to representations of policing in popular culture with a particular focus on TV drama.

Policing, "Cop Culture" and Representations of Policing

Sackmann (1991) defines culture as *"the collective construction of social reality".* A great deal of the analysis of policing focuses on *"cop culture".* There are a number of difficulties with using *"cop culture"* instrumentally. As Chan (1996) argues occupational culture is not monolithic. Cop culture for Chan is *"poorly defined and of little analytical value".* In fact as Manning (1993) argues there clear differences between "street *cop culture"* and *"management culture".* The term *"cop culture"* is, in fact, a label for a form of *hegemonic masculinity* (Carrigan et al 1985) found in police settings. The major themes here would be: an emphasis on action as a solution to problems; a strong sense of group identity and hyper-masculinity manifesting itself in a series of misogynistic and racist attitudes. In this schema, the police are hardbitten, cynical and need to be aggressive to deal with the dangers that they face on a day to day basis. Loftus (2008) notes that despite the introduction of a more diverse workforce and a range of equal opportunities policies, these attitudes appear to be deeply entrenched within police culture. This especially is the case amongst the lower ranked officers, who have most face to face contact with the public.

Reiner (2000) links the development of these cultural attitudes outlined above to the demands of police work itself rather

than arising out of the wider society. Goldsmith (1990) suggests that these cultural attitudes are part of a functional response to the demands of the post. Waddington (1999) takes issue with the way that *"canteen culture"* has been used uncritically. For Waddington, the culture of the police canteen is, very importantly an oral one. As he suggests, there is a gap between rhetoric and action. Despite the ongoing portrayal of police work as dynamic and exciting, the majority of it is not. To take one example, murder investigations involve a great deal of checking information, gathering statements and looking at tapes from CCTV, rather than the psychological profiling and car chases of the popular imagination

In popular culture, the dominant portrayal still of police and policing is one of heightened drama with the investigation of serious crimes particularly sexual crimes, serials killers and murderous assaults by strangers dominating. This image has been developed to include the new technologies and techniques available. The high technique crime solvers of *CSI* are a modern version of the Holmesian detective genius. One interesting result of this is that such programmes along with *Prime Suspect, Waking the Dead* and *Silent Witness* – all of which feature gruesome crime scenes and post mortems or both – create pornography of death. This allows for the showing of images of brutally assaulted and defiled women or children – overwhelming the victims in such programme – to become acceptable on mainstream TV largely without comment (Foltyn 2008).

As outlined above, the media has a key role to play in the construction of our knowledge of crime and policing. Hall et al (1978) outline the ways, in which, the police seek to control access to information. There has been something of a shift here. However, the police still seek to act as what Hall calls "primary *definers"* of crime news. Allen et al (1997) have identified three ideal types of representation. In the post-war decades, they argue the representation of policing in the UK reflected the general social consensus. The dominate image here is Jack Warner playing George Dixon in the popular TV series *Dixon of Dock Green* that ran from 1955-1976. George Dixon, despite ironically being based on the character shot by Dirk Bogarde in the 1950 film *The Blue Lamp,* came to represent the archetypal *"British Bobby"* a pillar of the local community who was widely respected. The homely and reassuring values that Dixon represented were summarised in his catchphrase *"Evenin' all". Dixon of Dock Green* was sent in an idealised version of the East End of London an area that has been associated with key notions of white working class identity.

The social changes of the 1960s were reflected in the development of more critical or realistic dramatic representations of policing. In the UK, the TV series *Z-Cars* set in a northern city is an example of this more authentic approach. Allen et al. (1997) argue that from the late 1970s onwards there has been a division between nostalgic representations of policing – the series *Heartbeat* is an example of this and more critical approaches such as *The Wire.*

Heartbeat is set in an idealised 1960s rural Yorkshire, which has been unaffected by any of the social and cultural changes that took place in that decade. The show was first aired in 1992 and the shocks to policing and the CJS of the 1970s and 80s were safely put to one side. *The Wire* is at the other end of this continuum. The series regularly lauded as one of the best dramas ever follows a unit of police officers who are tackling drug crime in modern Baltimore. Over five series, the drama presents a complex, nuanced portrait of a post-industrial American city. The series presents the bureaucratic, political and other pressures that police officers face. The *"cop culture"* that David Simon has presented in both *The Wire* and the earlier *Homicide: Life on the Streets* contains all the features that Reiner outlined. It is as far removed from *Heartbeat* as it is possible to imagine.

The shifts in the representations of policing outlined above also included changes in the way that individual officers and the impact of investigating violent crimes are constructed. Policing has been ranked amongst the five most stressful occupations (Violanti and Aron 1995). It is interesting to note that in these studies the main causes of stress – heavy workloads, inadequate supervision, and poor communication and staff shortages – are organ-

isational factors that are common across surveys of staff stress. It these factors rather than the work itself and the way that officers have to confront the impact of violence, tragedy and abuse that are seen as the key stressors. There is clearly a much wider recognition of the impact of work place stress. Kirschmann (2000), Malasch and Jackson(1979) and Malasch (1982) highlight the possible impact on police families. Violanti's (1996; 1998; 2010) work emphasises that the police recruiting systems target fit athletic young – still mainly men – but subsequent rates for a series of mental health and other measures show the possible long-term impact of carrying out this role.

George Dixon represented an idealised version of 1950s British masculinity. He is happily married and his work is never to seen to have any impact on his home life. The contrast with the modern detective could not be more pronounced. As Turnbull (2010) notes the Swedish detective Wallender has become an archetypal modern police officer. He is separated from his wife and beset with a range of personal and family problems – a difficult relationship with his daughter and he faces the challenge of his father's Alzheimer's disease. Against this background, he has to investigate a series of brutal and violent crimes that are used to illustrate the fault lines in the Sweden's reputation as a progressive, liberal social democratic utopia. Wallender is a successful policeman but this has come at a tremendous personal cost. In the Swedish TV production Actor Krister Hennekesen plays Wallender as a character from a Bergmann film prone to long bouts of introspection and world-weariness. In *Innan Fosten* (2005) He outlines the personal impact of policing to his daughter, trying to persuade her not to follow him:

> "Good cops can't quit. They allow themselves to be ground down without doing a thing to stop it. ... The job absorbs you. You don't even notice you are losing your wife and child."

The portrayal of Wallender alongside modern American cops such as Sipowicz in *NYPD Blue* or McNulty in *The Wire* is part of move away from the classic crime procedural drama to a wider consideration of the impact on those – from all sides- caught up in such terrible events. Far from a denial of any impact on the individuals, the focus of these shows is often to examine its implications. Sipowicz is a Vietnam vet who is an alcoholic, violent, racist and misogynist he frames suspects or beats confessions out of them. He knows the streets so all the other cops respect him – he shows his softer side by keeping tropical fish. Sipowicz find love after the break up of his first marriage, obviously this failed because of work, but his wife a DA is shot). NYPD was seen as ground breaking because of the explicit sex scenes but also the way it was filmed – hand held cameras to give that jerky authentic urban feel.

McNulty hates the bureaucracy that is overtaking the police – this is one of the great themes of *The Wire*. His breaches of duty are legendary – drinking, having sex on duty. He is regarded as a hero because on an undercover vice operation he has sex with a prostitute and charges it to expenses. In another scene he is having sex with a woman in a car park on the bonnet of his car as a patrol car drives, by he flashes his police badge so they drive on. McNulty's first marriage fails - he spends one access visit teaching his sons how to tail suspects and they practice on one of Baltimore's biggest drug dealers. McNulty is sober in one series and in a stable relationship but this cannot last. He ends up mutilating the corpse of homeless people and feeding information to a reporter so that the higher ups will give the Dept resources. He is the archetypal good cop driven so mad that he comes a bad cop but as the audience knows *"bad" cops are "good"*.

Sipowicz and McNulty are examples of the ways, in which, behaviours that might be termed symptoms of Post-traumatic stress disorder (PTSD) are now routinely emphasised in TV police dramas. Both characters have alcohol problems, McNulty never acknowledges this but Sipowicz sobers up after he is shot but his battle with the bottle is a recurring theme of the series. Essentially, both are regarded as "good cops" who have been ground down by the street and will not play management games. Reiner (2003) highlighted

what he described as "*an exaggerated sense of mission"*as a recurring feature of police occupational culture. This is demonstrated in the over identification with particular cases or victims – these are usually cases involving sexual offences against women or children. Police work comes to dominate the lives of these officers with chaotic effects on their families and children. They become emotional unstable and lack any sense of professional boundaries.

In *Life on Mars,* John Simm plays a modern PC detective who is in coma and finds himself back in the 1970s Manchester of his youth. There is a comic tension between the Simm character and Gene Hunt played by Phil Glennister. Hunt is essentially a combination of Regan and Carter from *The Sweeney.* The programme was a huge success tapping into the insatiable appetite for nostalgia in popular culture. There are several audiences here –including those who lived through that time and admire the period detail. Gene Hunt rapidly became a cult hero particularly for those on the right as he came to represent how the police force had lost its way crushed by political correctness and bureaucracy. This is part of a much wider discourse that suggests that despite nearly thirty years of neo-liberal government and a doubling of the prison population between 1992 and 2010, the Criminal Justice System has gone soft. For commentators like Peter Hitchens (2010) increased crime is the result of these developments. Hunt represents a return to a better time.

> "Our first line of defence used to be people more or less like Gene Hunt in 'Life on Mars' and 'Ashes to Ashes'. Yes, they did rough up criminals (or 'suspects' if you must). They got away with it because they almost always roughed up the right ones."

Hunt like *Alf Garnett* before him was a character, on British TV, who was meant to satirising reactionary views, who became popular on the basis of espousing them. As with Garnett, the more objectionable and louder the expression the more popular he became. There is not space to explore in depth debates about political correctness.

However one of the great claims is that political correctness prevents individuals saying what they really feel or that the debate is restricted. In this context, men have become feminised or in Hunt's terms "*soft sissy girly Nancy French bender Man United supporting Poofs*" Despite the fact that the popular press in the UK is largely right-wing and Messrs Littlejohn, Clarkson and Hitchens (to name but three) have weekly columns, without apparent irony, saying things that they are no longer allowed to say because of the PC brigade.

Hunt represents a form of hegemonic masculinity that had allegedly disappeared but also a form of policing where the rules were bent or ignored but this was allegedly done in the wider interests of society. Cooper (2007) argued that Hunt was popular with women as he represents strong males sure themselves and their roles. Hunt is contrasted with the modern metrosexual male, unsure of his role in relationships but at least willing to use moisturiser. This argument seems to assume that the use of male grooming products and the development of a more liberal politics of masculinity are somehow inextricably linked.   Hunt was clearly written as a comic character but the reactions to him highlight continuing debates and anxieties about the nature of masculinity. The debate about masculinity is part of the wider anxieties such as class and race that manifest themselves in the crisis of late modernity (Bauman 2004).

The huge social and political changes that have occurred in Britain since the 1960s have inevitably had an impact on attitudes to the police and policing. Hough (2003) suggests that technological changes mean that the police have lost the contacts they once had with communities. The police now respond more to emergencies. rather than maintaining a visible, reassuring social presence. Overall, Reiner (2000) argues that the *sacred* imagine has been replaced by a *profane* one. In a more cynical age, the police are now regarded as just another public service. Police forces have seen the introduction of managerialism or *New Public Management (NPM)* (Pollitt & Bouckaert 2004*)* in the same way as other areas of the public sector. The main themes in the process have been a greater openness and accountability. In addition,

areas of service provision have been outsourced to civilian bodies. A great deal of information about the use of resources has now come into the public domain. For example, GMP like other forces can be followed on Twitter. In recent exercise, GMP published each call out to demonstrate the range of its work. The GMP website provides a range of information including the Chief Constable's blog. Social media has also been used in a more critical fashion by officers to provide an insight to their day to day working lives. The *Nightjack* blog – an ironic reference to *Dixon of Dock Green* – won the Orwell prize for its author Richard Horton a Lancashire Detective Constable.

Jackson and Sunshine (2007) argue that in a more pluralistic society, the police or any institution cannot hope to be "*an effective symbol of unitary order".* For some commentators on the political right (Hitchens 2004), the decline in public trust in the police is not only a symptom of a wider social malaise, it is also a process that the leaders of the police have failed to challenge. From this viewpoint, the police force shares the same obsessions as other public bodies – meeting bureaucratic targets and demonstrating its commitment to diversity. The changes in the recruitment of police officers – more female officers and officers from minority backgrounds-actually challenge Jackson's argument. The police as an institution, particularly in large urban areas, reflect the wider social changes that have taken place in the postwar period. It would be naïve to think that this process has been a smooth and linear one. The current policing approach is to try to attack the fear of crime by emphasising that serious crime is a rare event but also the steps individuals can take to minimise risk. This produces the interesting political effect that the traditional defenders of the police on the Right – particularly the Jeremiahs in the tabloid press – feel that the police have given up in their attempts to maintain public order.

The reputation of the police as an institution was very seriously undermined by the corruption scandals of the 1970s and the miscarriages of justice that occurred in that period – miscarriages that were the result of police misconduct. A series of miscarriages of justice related to

Irish republican terrorist cases – *The Birmingham Six, the Guildford Four and the Maguire Seven* highlighted police corruption and the violent treatment of suspects. The police were inevitably involved in the turbulent political and social changes of the Thatcher years (McCabe et al 1988, Gilmour 1992).In addition to these societal changes outlined above, there are a number of policing specific issues that changed the nature of the working environment for the volunteers. The Police and Criminal Evidence Act (1984) was introduced to provide detained persons with more rights in police custody – these included the taping recording of interviews. Police failures in the hunt of the serial killer Peter Sutcliffe who murdered thirteen women in the North of England in the late 70s and early 80s ensured policing remained under the media spotlight. The issue of the appalling treatment of rape victims by investigating officers was brought to the wider attention of the public by the *"Thames Valley rape case".* A fly on the wall documentary showed a woman reporting an assault being verbally abused by an officer taking her statement. At one point, he shouts at her " *… this is the biggest load of bollocks I've ever heard".* In 1999, the Macpherson Inquiry into the Metropolitan Police's handling of the investigation into the murder of black teenager Stephen Lawrence found the force was *"institutionally racist"*

The Research Project

The research project is a pilot study of police officers' views of how their work is presented in popular culture. It forms part of a wider project examining the impact of crime, particularly sexual violent crime. Ethical approval for the research was obtained via standard University procedures. For ethical and other reasons, the research team decided to try and recruit retired police officers. An email was sent to the branch secretary of the local *National Association of Retired Police Officers (NARPO)* asking if they would assist the project. A further email was then sent to all *NARPO* members asking for volunteers who had experience of investigating serious offences and sexual violence, who would be in-

terested in discussing "*how police investigations into serious offences and sexual violence are portrayed in drama and fiction".* The email produced an instant response and ten volunteers agreed to be interviewed. The interviews were recorded expect in two cases where the volunteers did not agree to this. The interviews, apart from one, were carried out by two members of the research team. There were nine male volunteers and one female. As the officers had retired all had, at least thirty years service. The research thus covered policing from the period form the mid-sixties up to the present. As a group, the volunteers had a tremendous amount of experience in a wide range of policing roles including leading major murder inquiries. In a series of semi-structured interviews, among questions posed to interviewees were the following:

- *Do you watch or read detective or crime dramas or thrillers?*
- *What do you like/dislike about this genre?*
- *Are there areas that are portrayed very well or badly in the genre?*
- *Do you have a favourite programme, writer or character?*
- *Why do they think the genre is so popular?*

The taped interviews were then transcribed. These transcripts were then subjected to a two stage coding process. An initial thematic analysis and open coding of the texts identified emerging themes and their relationship to the research questions posed. In the second stage, line by line analysis of the transcripts was undertaken.

Emerging themes

None of the volunteers regularly watched TV crime drama nor had they done so throughout their careers. All the volunteers emphasised that – like any job- policing includes an element of routine. As interviewee A put it "*Most police work is boring so a realistic drama would be unwatchable".* Another interviewee, who had worked on the drugs squad, highlighted the fact that a great deal of this period was spent on surveillance work gathering intelligence or evidence for potential cases. This work is painstaking, time consuming and not in any sense glamorous. The other major factor that meant that the interviewees did not watch these dramas was that they are, from the police perspective, completely improbable but also full of procedural errors. In fact, two interviewees had worked as consultants on recent dramas to try and ensure that there was a more realistic portrayal of the policing process. Examples of the procedural errors given included; *senior investigating officers carrying out house to house inquiries, the ways, in which post-mortems were presented and the investigative role that pathologists or other professionals take on.* It was interesting to note that several interviewees stated that their wives were much likely to watch and enjoy TV crime dramas than themselves. In addition, they could not watch as a couple because "*I sit and shout at the TV".*

A number of interviewees also felt that TV drama sanitises crime and its effects – this was often given as an explanation for its continuing attraction to viewers and readers. The sanitising effect was twofold – particularly in relation to violent crime. Firstly, it was felt that the physical impact of violent assaults with weapons could never be properly portrayed. In addition, the long –term impact on the families of victims was felt to marginalised. The only area of TV's crime output that was viewed regularly was *Crimewatch* – or similar programmes where the police were seeking assistance. Interviewee C stated that he watch these shows for *"professional reasons".* It was also recognised that the officers involved would have been through a tremendous investigative workload with little joy for the case to be on such a programme. There appeared to be an element of professional camaraderie here.

Given the working careers that the volunteers had experienced it was perhaps not too surprising that in every interview the programme *Life on Mars* was brought up. This produced a variety of responses from " *I worked with several Gene Hunts"* to *"it was a parody with some elements of*

truth". However, all the interviewees felt that the police had become a more professional organisation since that period – for which for most of the officers was at the start of their careers. There was no evidence that this was seen as a *"golden period".* The elements of the organisational culture that so shocks *Sam Tyler (*John Simm) – the casual sexism, racism and homophobia, treatment of suspects and a drinking culture were all acknowledged as having some basis in the working environment of the time. However, all the interviewees emphasised that policing and police officers simply reflected the wider cultural attitudes of the period. These attitudes were seen as commonly held social views in that period. As noted above, this is part of the conceit of the programme – the viewer is invited to mock these outmoded social attitudes the assumption being that these prejudices have been eradicated.

The final emerging theme in this project is concerned with the issue of cultural representation and the possible impacts that this has on individual police officers and the audience's understanding of their work. Two interviewees identified a link between the media representation and the way that police officers behave. There appeared to a loop between media or popular cultural representations and the officers on whose work the TV drama was based. Interviewee E used the example of the 1970s show *The Sweeney.* This was a huge TV hit. He noted that his team began to copy some of the mannerisms of the lead characters Regan and Carter – *"when the Sweeney was on, officers started to call me Guv".* If the majority of the audience has little, if any, meaningful contact with the police or other areas of the CJS then the cultural representations of institutions becomes all the more important and possibly influential.

Conclusion

As one scans the TV schedules or looks at the latest bestsellers list, it appears very unlikely that our addiction to rape, murder and serial killers will end any time soon. The popularity of crime fiction and drama raises a number of intriguing questions.

If as Dyer (2002) suggests that entertainment is a form of escapism because its offers a vision of *"something better"* something that everyday life does not, why do audiences continue to watch such programmes. They meet the second criteria of Dyer's (2002) test as, thankfully, for the overwhelming majority of the audience, their experience of the impact of violent crime is essentially an indirect one. Despite its increasing concern with the depiction of violent crime, the majority of this genre offers the audience an ultimately comforting narrative where perpetrators are brought to justice and victims and families re-establish their previous lives. More nuanced and complex work such as *The Wire* does not deal in such moral certitudes.

In this study, experienced police officers highlighted that if we rely on TV drama for our understandings of their work and roles, we will be misled.

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    Heartbeat
    Homicide: Life on the Streets
    Life on Mars Series 1+2
    NYPD Blue
    The Wire: Series 1-5

Films

    The Blue Lamp (1950)
    Dirty Harry (1971)
    Magnum Force (1973)

4 POLICE SKILLS IN ARREST AND SELF-DEFENCE TECHNIQUES — A STUDY OF KNOWLEDGE TRANSFER FROM THE ACADEMY TO PROFESSIONAL PRACTICE

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Introduction

A feature that sets police work apart from other service professions is that the police officer is allowed to use force under certain circumstances. The use of force against other people is rarely desirable, but in the police profession it is sometimes necessary to enforce the law and increase people's actual security.

The officers are also at risk of being targets for violent attacks. A survey made by the Police Union indicates that 69% of police officers have met with violence while on duty within a single year (Exquiro Market Research, 2009). Therefore, it is important that police officers have relevant skills in the use of force to defend themselves and to, when necessary, make arrests safely and professionally. The question is whether or not Swedish police officers have been provided with the proper skills to deal with the violence that accompanies police work in a professional, safe and respectful way.

Holgerson (2005) showed that Swedish police authorities have a poor educational system. Stenmark (2005) found that novice officers in the field mainly develop their skills through imitating experienced officers. The National Police Commissioner, Bengt Svensson, found it problematic that every third Swedish police officer can be viewed as inexperienced and that these officers are mostly working in the field (Aftonbladet, 2012). For this reason, there could be a risk that novice police officers never develop proper skills in the art of making arrests and defending themselves against the violent acts directed towards them in their profession. Therefore, is it important that the basic training programme provides cadets with good fundamental skills in the art of officer safety.

The purpose of officer safety training is to give the cadets knowledge about and skills in arrest and self-defence techniques and to prepare them to handle situations where a threat of violence is present and which are likely to emerge in their work in the near future. The cadets are also trained in use of the baton, pepper spray and handcuffs. Furthermore, this training aims at enhancing the tactical communicative skills of the cadets and thereby teaching them to solve problems without using force (Sjöström, 2004). The techniques used in the officer safety programme are from the Conflict/Self-defence handbook (2006). These techniques have been scrutinized and approved from an ethical and medical standpoint.

The training for these techniques and tactics must be based both on their appropriateness and effectiveness in the field and the availability of time for developing a degree of mastery in their use. A study by Ekman (1999) demonstrated that Swedish police officers believe that the basic training programmes do not adequately reflect police officers´ practical work. The opinion is that cadets do not get relevant professional knowledge from such programmes.

The aim of this study is to investigate how newly qualified officers evaluate their skill training in terms of self-defence and arrest techniques as part of the Basic Training Programme at Umeå University. Is the training good enough or should its design and content be changed in order to better fit police officers' needs? In particular, the study addresses the question of whether or not the practical training is relevant for the officer on duty and the extent to which their skills are maintained and developed in the profession.

Method

This study consisted of seven semi-structured interviews with four male and three female police officers. All of them graduated from the Basic Training Programme at the

University of Umeå and worked as police officers in Umeå. Their professional backgrounds varied from one to three years of experience in police field work. The interviewees that were invited to participate in this research project had personal experience in the use of force and the Basic Training Programme was still fresh in their minds. The interviews lasted 40-60 minutes and took place in the call room at the police station in Umeå.

The participants were informed that the interviews would be recorded and that their responses could be quoted from in the research report, but without revealing their identity. The interviews were transcribed soon after they were finished. The transcriptions were analyzed in order to find meaningful themes. The themes that emerged from the interviews were as follows:

- Theme 1: "Opinions on the Basic Training Programme as preparation for handling violence." The informant's experiences with the Basic Training Programme and how it addressed matters of intervention and self-defence; any relevant capacities that the informants had obtained and what they had not obtained as a part of basic training.

- Theme 2: "The techniques and their usefulness." How the informants use their techniques and how well they work in a critical situation.

- Theme 3: "Further training and maintenance of skills and capacities as a part of officer safety training." The present skills of the officers and any need for further training on intervention and self-defence.

Results

The empirical results show that all of the officers had developed important knowledge and skills related to their profession during the officer safety training. The training had given them adequate techniques for how to arrest people. The education how to use the baton, pepper spray and handcuffs was also adequate. All interviewees but one learned how to hit effectively with the baton.

"I´ve learnt which techniques I can use, the one that is suitable for me, and I´ve got a solid ground to stand on." (Officer 6)

"You have to learn the foundations and I think you learn them very well at the Academy, and you always try to find the basic techniques, but the way to get there is just wrestling." (Officer 3)

When it comes to self-defence, most of the interviewees reported that they are confident in their ability to defend themselves with the baton and pepper spray. All of the officers had used their knowledge in tactics to avoid violent confrontations. The implication of this has to some extent given them a better sense of safety in their daily work.

"If one hasn´t got a [solid] base before school, then he or she will definitely have no self-defence technique when leaving it." (Officer 5)

The results also show that officers are worried about facing close combat violence if the tactical approach fails. In such situations, they may be unable to reach their weapons. The results indicate the need for increased self-defence training in close combat.

"As a girl I sometimes feel that if I´m attacked by a bigger and stronger guy, I won't have control. Here´s what can save me," she says pointing at her belt. "If I can´t reach it, I´ve nothing at all." (Officer 4)

"In one lesson, we got a leaflet where we got to learn about the techniques that are about injuring the attacker. This was far too little because you can actually end up in such a situation and then you should be able to also handle it in the same way as when dealing with a less violate person." (Officer 7)

All of the officers suggested that the Basic Training Programme should be based on learning techniques in which specific exercises are repeated in calm situations. The techniques must be repeated until they can be done automatically, otherwise they will not work in critical situations.

"I find it important to have certain techniques to choose from. These must be drummed into me. To start thinking about what sort of technique [to use] when I´m stressed, that won´t work for me." (Officer 5)

"During training, one just stood there thinking: Is it my right arm first? But now it just happens." (Officer 1)

The officers claimed that the training has consisted mainly of repetitions under calm circumstances. The opinion is that the officer safety training programme should take the training to the next level to a greater extent through dynamic practice, so-called "sparing". They feel this would be necessary in order to learn how to use the techniques in realistic situations. They stated that exercises in form of role-playing were valuable for understanding the complexity of an intervention or a self-defence situation.

"To stand there pushing over and over on a passive person is necessary as a start. But then, to see if it works, it´s good to have a 'case'. So, I find both parts okay, but the 'case' is better to get it into one´s head." (Officer 6)

However, the interviewees also reported that the dynamic exercise should include receiving direct feedback from the teacher. In this feedback, the teacher should give examples of how to combine the techniques and adapt them to the individual. The officers missed that type of feedback in the education. This lack of feedback leads to a failure of understanding regarding when and where the different techniques can be used in relation to a specific situation.

"The officer safety training should be based on training in different situations. It should be as realistic as possible." (Officer 3)

Usefulness of the techniques

The officers claimed that the techniques they currently use were learnt and developed at the Basic Training Programme. Out of about 20 techniques, they reported only using four or five actively while on duty. Their opinion is that the officer safety training had presented them with more techniques than it had been possible to absorb. Each had found their favourite techniques, techniques which they had learned early in the officer safety training programme. They all have, with few exceptions, the same favourites. The majority of them prefer to mainly use "rough" motor techniques to take down and control offenders.

"In a tough situation, one hasn´t time to think, but one must quickly get the person under control. You can´t think of fancy grips, you must use a few firm grips, which one has learnt will work." (Officer 5)

"Helicopters and propellers, and spin around and jump over and so [on], it's so fast to bring down the person to the ground." (Officer 1)

Maintaining professional competence

The results illustrate that the officers feel that they did not receive enough training in terms of the skills under scrutiny here. There are no regular training exercises where they work. Scheduled days for further education are their only opportunities. Two or three times a year they are guided by a coach.

This lack of regular exercise leads to a gradually decreasing ability to deal with violence in a professional way. One of the officers reported that she has lost so much technical skill, she feels incapable of practicing on her own because she does not know how and what to practice.

"After three years of service with minimal training, the knowledge faded. I need coaching to relearn some of the techniques." (Officer 6)

The few occasions when they exercise these skills in training are of a dynamic design. The focus is on quickly getting control over a disorderly person. The technique being used is less important. The coach advises the officer to find out what is best for him or her.

Discussion

It is obvious that the interviewed officers are not competent in all of the techniques introduced in the officer safety training programme. The officers consider it a waste of time to practice techniques that are not used.

However, there is a possibility that these techniques have contributed to the officers´ skills in making arrests and in self-defence. Through these techniques, they may have honed their coordination and learned how to use their body movements to overpower an offender.

The officers practice self-defence and arrest techniques currently two or three times a year. This is too seldom to maintain their skills and competence. A study by Lohne Lie (2010) showed that Norwegian police officers receive training just as frequently as the officers in this study. Lohne Lie also found that 59% of the Norwegian officers had insufficient competence in self-defence and intervention techniques. The Norwegian officer safety training programme contains far fewer techniques compared to the list of arrest techniques in Sweden (2007). Therefore, it is all but certain that fewer techniques will lead automatically to increased skill levels.

The results also show that none of the officers has ever been in a situation where they have been forced to use "hard" self-defence techniques in close combat. The question is if it is necessary to spend time training police officers for situations they are not likely to encounter.

One problem is that if they ever get into such a situation, then the lack of self-defence skills can be fatal. Nevertheless, too much time should not be spent on self-defence techniques in the officer safety programme because such techniques can give dubious signals to the cadets. There is a risk that the police profession will then be depicted as being more violent than it really is. The officers will then be more motivated to learn self-defence and less motivated to learn arrest techniques. Their skills in arrest techniques would then be insufficient with an increased risk for injuries. Another question then has to do with whether or not the officer safety programme should give priority to more profound training in tactics in order to create confident police officers who are aware of the possible risks of using more aggressive techniques.

Conclusions

The results show that the officer safety training programme had provided officers with skills in techniques that they may not have opportunity to use. The officers reported that have chosen their favourite techniques, which were learnt in the basic programme and adopted for practical use. Almost all of their favourite techniques are "hard" motor techniques and thus are easier to learn than the more advanced techniques. Their favourite techniques are also those that the cadets practice the most during lessons (Bålhammar 2011). However, to truly draw strong conclusions about the number of techniques that should be covered in the police training and the kind of techniques that are the most useful for a police officer in their field of work, more extensive research is required.

The results indicate that the officer safety programme can be improved even if the majority of officers under study reported that they had acquired an acceptable level of competence to intervene in cases involving violence or the threat of it. The content of the scheduled teaching should be made more efficient. Basic techniques should be presented to the cadets during lessons, but the time allotted for static practice should be shortened. The cadets themselves should be responsible for scheduling time for independent practise. Thus, this would allow more time for lessons that practice dynamic forms of intervention to help the cadets master techniques that are suitable for the situation at hand.

The dynamic training will create an

understanding about the techniques that best fit a specific situation and how such techniques could be combined in a successful intervention. By focusing on dynamic practice during scheduled lessons, it would be easier to evaluate each cadet´s skill level and his or her need for further training. It is preferable to give the cadets insight into their own level of skills under realistic conditions.

Anderson (2002) and Kyles (2011) showed that police officers endure high stress levels in situation of physical action. Groer (2010) pointed out that practising techniques in various scenarios offers officers the possibility to create a sense of reality and stress. Nieuwenhuys (2009) revealed that a police officer´s ability to handle violence decreases radically under stress. It is therefore likely that more practice in dynamic scenarios can be useful for cadets in their preparations for work in the field. Likewise, to enhance the sense of safety for the officers, self-defence techniques should be emphasized and allotted more time in their schedules.

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5   THE SIGNIFICANCE OF SCENARIO TRAINING FOR THE LEARNING PROCESS IN POLICE TRAINING

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Introduction

Umeå University is a place in Sweden where you can study in the Basic Training Programme for Police Officers. The educational aim is to train students to be ready to meet the demands they will face when they later join a police organization and begin their police work training. Educational planning, Goldstein and Ford (2002) claim, entails an analysis of the work requirements pertaining to knowledge, abilities and skills. They propose a model of how this needs analysis should be done, what they call «a model of the needs assessment process.» (Goldstein & Ford, 2002)

The teaching in the police training courses is inspired by Goldstein and Ford's model. It is based on case-orientated learning in the form of lectures, seminars, group work, individual assignments, applied exercises and skills training. Students are expected to take the major responsibility for their own learning and also to participate actively in discussions during lectures and seminars as well as in the work on different cases. The teaching methods and examination sessions are designed to hone students› abilities to express themselves appropriately and critically in both their spoken and written language (Polisutbildningen, enheten för utbildning, polisprogrammet [Basic Training Programme for Police Officers in Umeå, Police Education Unit], 2011).

Teaching both within the courses as well as between the courses is integrated consistently throughout the training programme. Theory is integrated with practice in the form of exercises, systematic skills training and field studies to deepen the students› theoretical and practical knowledge base (Polisutbildningen, enheten för utbildning[Basic Training Programme for Police Officers in Umeå, Police Education Unit], 2011). A large part of the programme consists of applied scenarios for learning practical skills that are relevant in police work. This article examines the use of scenario training in the acquisition of new skills and new knowledge in terms of drug-related crimes. The students are expected to be able to identify and understand the situation of vulnerable groups (young people, drug addicts and people with mental illness) and their living conditions in the community as well as to develop their skills in applying the relevant legislation to the daily work of police officers with these groups. They are also to have the knowledge to be able to reason with other agencies and community stakeholder's opportunities and obligations (Studieguide för Ordning och trygget III [Study Guide for Order and Security], 2011).

Scenario training for drug-related crimes

The scenario training that is the focus of this study takes place in the third semester when the students learn about drug-related crimes. In this particular scenario training, the students go through four different situations related to drugs that are similar to those they might encounter when doing police work.

The students perform this scenario work in groups of six persons. Two students take part in it as learners, while the others observe and afterwards provide them with feedback. The training takes place in environments designed to resemble situations that any police officer is likely encounter at work. This is achieved by using purpose-built apartments, shops and other premises. The scenarios also involve specially hired actors in different roles.

The role for the participating students is that of a police officer. As soon as the students think that they have completed their assignment dealing with any of those four situations, they receive feedback on their performance and behaviour. This feedback/reflection is a major part of the training. It is the teacher's task to conduct

a structured discussion with the whole group. The idea is that everyone should be allowed to speak and give their personal feedback/reflection.

Aim of the study and the method

The aim of the study was to investigate how police officers felt about the influence of the scenario training in terms of their learning during their police education and how they now evaluate its impact when they are working as police officers. In other words, the study focused on the relationship between the scenario training and the students› learning process during the training and on how it has affected them later in their professional life. The research question is as follows:

- Did police students feel that scenario training in drug-related crimes provided them with an opportunity to obtain relevant knowledge for their profession?

- The study was based on a hermeneutic interpretation been methodology. The information for the study was gathered from interviews with six police officers.

The questions in the interview were derived from Karp and Stenmark's (2011) analytical model. The interviews were narrative and semi-structured. Each of the interviews lasted approximately two hours and took place at the police station where the police officers were working. All of the interviewees had graduated from the Basic Training Programme for Police Officers in Umeå and had working for about a year in their profession. The selection criteria were that they should have been in contact with drug-related crimes as a part of their work and also that they had become acquainted with such crimes during their police education.

The interviews were analysed, processed and encoded following the guidelines provided by Watts Boolsen (Watts Boolsen, 2007). The interviews were first transcribed; a compilation for each question was then made based on the different responses. The research question was answered on the basis of these compilations, and interpretation of the data was accomplished with the help of the concepts of frames, ideology and pattern, which are specified in the analytical model provided by Karp and Stenmark (2011).

The interviewees were told that participation in the study was voluntary. They were also informed that they had the right at any time to stop participating and that their identity would not be revealed in the report. The ethical guidelines that were followed in the study respected the rules and guidelines set forth for research projects of this kind (Codex, 2010).

Theoretical perspective

The analytical framework explicates the influence of conservative and innovative forces on the police students' learning process during the scenario training (Karp & Stenmark, 2011).

This framework pays attention to frames, ideologies and patterns, starting from the police training and continuing to the participant's professional life as a police officer, how these forces affect the learning process and whether or not the process is linked more to reproductive learning or to development/change. Reproductive learning involves copying an old pattern.

The model provides a basis for analysing the conservative and innovative forces in a police organization (see Figure 1). Karp and Stenmark's (2011) main conclusion is that the model can be used to describe and analyse the practice that police students and newly hired police officers encounter and adopt.

	Training	Professional life
Conservative forces	Frames Ideology Pattern	Frames Ideology Pattern
Innovative forces	Frames Ideology Pattern	Frames Ideology Pattern

Figure 1. The framework for analyzing conservative and innovative forces (Karp & Stenmark, 2011, p. 8).

Within the context of police education, Karp and Stenmark (2010) define the main concepts in their framework as follows:

- Frames: policy decisions, such as regulating the length of training, curricula and the number of students.
- Ideology: formal education goals and learning outcomes.
- Pattern: *esprit de corps* and culture, students' ideal model for a police officer and what they believe the public expects of a police officer.

Within the context of professional life as police officers, the concepts are defined as follows:

- Frames: the laws and regulations governing police duties, such as the Police Act and the Police Regulation.
- Ideology: political interest, community and social debates.
- Pattern: socialization process within the profession, older colleagues in school, younger colleagues, *esprit de corps,* culture and dependence on other colleagues in vulnerable situations.

Results of the study

The experience of scenario training during the training programme

The results show that the police officers thought that the scenario training gave them an opportunity to be in an environment that they had never been in before.

What they remembered above all was the discovery of how important it is to be alert and quick because everything usually happens quite rapidly in these situations. The lesson they took from their learning was a sense of the importance of retaining their control over a situation and an awareness of safety-related issues and, at the same time, the need to act fast in order to avoid losing time when becoming suspicious of a drug-related crime.

They perceived the scenario training as being relevant and realistic. The majority of the interviewees also expressed the feeling that the training situation was stressful because it was a new situation for them.

All of the interviewees believed that the feedback was positively related to the development of their knowledge.

"It was in the feedback and the reflection [that] you really learned." (Police officer 1)

The teachers' feedback received high ratings. The informants saw them as competent and well versed in the subject. However, those teachers who had worked in the field recently were conferred a higher status than those who had spent some years in administrative tasks in the police station.

"It was really useful to have them instead of having police teachers who had been inside for 4-5 years and [had] maybe lost this realistic feeling a little bit about how things are in reality. I think it's easy to become a little too academic and a little too much [about] paperwork." (Police officer 2)

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The experience of advocacy and time for reflection at the scenario training

All of the informants believe that the feedback contributed to their learning process. It helped them to reflect on and analyse their actions in the situations making up the scenario training. The scenario training together with the feedback helped them build a link between theory and practice.

However, the police officers thought that receiving additional feedback later, after the scenario training, might have enhanced their learning even further in their training programme. It might have contributed positively to the deepening of their knowledge.

"But it might be missing an opportunity to intercept the thoughts or reflection you have a few days or a week afterwards. But then it is a new course, new teachers and then it [what you learned during the scenario training] disappears." (Police officer 4)

The experience of relevant knowledge acquired from the scenario training after being in the profession for one year

The first time the interviewees came into contact with drug-related crime they all recognized the situation from the scenario training provided during the programme. They encountered familiar situations, such as young people with drugs, had opportunity to build up a reasonable suspicion of drug-related crime, and dealt with the stress of an unfamiliar environment and the knowledge that they needed to respond quickly. None of the interviewees felt completely safe in such a situation. They all talked about feeling that they did not have sufficient experience with such situations yet.

"No, there it felt like I had too little practice and like I need much, much more. Mostly it's pretty fast situations and you have little time to think." (Police officer 5)

Three of the interviewees felt that they appreciated the scenario training more when they had been working at a police department for a while. Their personal experience from the field confirmed that the scenario training had been realistic and therefore helpful too.

"The best is to experience it and make mistakes in practice situations and see the difficulties. No, I cannot see any other way to learn it than to actually learn the practical." (Police officer 3)

All of the police officers interviewed in this study felt that the scenario training affected their development in one way or another. Some said that the scenarios had given them "a lesson" and had provided them with the future basis for their work. Others said that the training gave them an idea of how fast you have to be in drug-related crime situations to prevent the suspects from getting rid of the drugs.

"The experience-based learning, I think it gives an insight into how difficult it is before I stand where I am today." (Police officer 6)

Analysis and discussion

In this discussion, I shall use Karp and Stenmark's (2011) analytic model to analyze the results of the study. The two frameworks that I have chosen are ideology and patterns; I use them both when focusing on the training and on the officers' professional life.

Ideology

The ideology dimension involves a tension between police education and police practice. The scenario training is expected to contribute to police students' growth in knowledge and their acquisition of skills, e.g. in drug-related crimes. The team involved in teacher teaching for drug-related crimes critically examines and develops the training on the basis of their skills and experiences. However, the critical underpinnings in the learning situation (scenario training) might be counteracted by professional practice. There is a risk that the more experienced police officers simply transmit to the police students their habits

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and views instead of examining them critically and taking into account the opinions and knowledge of their future colleagues.

Strong conservative forces prevail in the police training, although the educational training aims at development by feedback and offers time for reflection. One reason for this relates to the status of the active police officers who are temporarily brought in as police teachers.

Pattern

The feedback was an important part of the interviewees' learning process. It helped them link theory with practice, especially due to the feedback they received or the reflection time afterwards. They even suggested the importance of having an opportunity to receive additional feedback sometime later during their basic training programme in relation to specific scenarios to deepen their knowledge.

The police students reported that look forward to being accepted by their future colleagues. Ekman (1999) describes a process whereby new police officers are socialized into the profession by older colleagues. They are eager to become part of the police collective and to be accepted as equals by their colleagues. They learn about the job and acquire police attitudes through interacting with the more senior officers.

Karp and Stenmark (2011) also discuss this socialization process and claim that it can be perceived even during the police training. Those teachers whose main work is in the field of policing and for whom teaching is only done in addition to their main work are closely followed by the students. The teachers reckon that the students as a group are more likely to listen to those teachers who do real police work as opposed to those who come from an academic background (Ibid).

Hult (2003) pays attention to this phenomenon as well in his study on workers' collectives. Prospective police colleagues possess in this respect higher status than other police educators. Police students consider it important to be accepted by their future colleagues. The interviewees gave police officers employed as teachers on a temporary basis a higher status than teachers with academic background. Consequently, the lessons that are really taken in during the police education by the police students may remain reproductive both in terms of their orientation and their substance (Karp & Stenmark, 2011).

My experience is that police students in the basic training programme just want more practice. It is practice that they keep on asking for. I have never encountered an instance in which they want more reflection. Could it be a question of maturity? Perhaps it is only when they experience the "real police world" without the protection provided to them by the educational environment that they see the worth of reflection and feel the need for it. If this is the case, why is it so?

Perhaps it is only after students feel that they have been accepted by their future colleagues that they consider themselves ready for reflection and other opportunities to deepen their knowledge. Or, perhaps it is only after they feel that they are part of the organization that the value of reflection becomes clear to them. The challenge is thus, how do you get the students to realize the value of reflection while they are doing their basic police training programme?

A few weeks ago the National Police Board proposed that, instead of having the practice semester at the end of the training programme, it should be scheduled between the third and fourth semesters. I believe this would help the students to gain more practical experiences from police work during their police training. Therefore, there would be more to reflect on. This would increase their opportunities to deepen their knowledge and understanding during the training programme before they start their professional life.

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6 EMPATHY AS A DESIRED ABILITY (REQUIREMENT) FOR POLICE OFFICERS — HOW CAN IT BE MEASURED?

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Introduction

In most professions that involve dealing with people, the capability of being empathic is central, especially when considering the desired outcomes of the contact situations. A doctor needs to understand a patient's description of his or her physical condition and a social worker needs to deal with the experiences witnessed without losing objectivity in other situations. Within the police profession, there is often a discussion regarding what capabilities or skills are necessary in order to perform the tasks in a professional way. This is a complex question with different answers depending on whom you ask and the perspective taken. There are several arguments about the need to view empathy as important in professions dealing with humans: this is also the case in police work.

The purpose of this paper is twofold. The first purpose is to investigate the relevance of empathy as one of the requirements in the selection of candidates for the police profession. The second purpose is to review theoretical models of empathy in the search for an appropriate model for police work. The following questions will be addressed:

1. In what sense is empathy a required ability for police officers according to the research findings and specified requirements in the existing documents?
2. How should a theoretical model of empathy be constituted that is best suited for police work?

To best answer the questions, the study will provide an overview of the international literature using such strategies as cross-referencing keywords. Next, documents describing the requirements in the Swedish context will be reviewed. When investigating the construct of empathy, the search strategies follow several steps: they start with the wider conceptualization of empathy and then narrow it down to specific theoretical approaches that are of interest to the police profession.

The paper begins by highlighting the reasoning behind the requirements for the police profession based on previous research and relevant documents. Thereafter, it will discuss the selection process by focusing on such concepts as self-selection and institutional selection. This will be followed by a description of the conceptualization, definition and history of the concept of empathy. The study then focuses on contemporary theoretical models of empathy with respect to the requirements for the police profession. The final discussion summarizes questions and conclusions concerning the most interesting findings and their implications for future research.

Requirements for the police profession

To understand the logic of the requirements of the police organization on an international level, there is a need to contextualize the role of the police in society. When discussing the initial role of the police, the social contract theory proposed by John Locke and others, like Jean-Jacques Rousseau and Thomas Hobbes, is interesting and important to consider (Locke & Hay, 2000).

The content of the social contract has to do with the citizen's agreement to abide by certain rules in return for receiving protection. Individuals in democratic societies have certain basic rights, such as the right to live, the right to be free and the right to possess property. The implication of the contract is that by participating in or being a part of such a society, citizens abandon some rights to an elected government, rights such as the right to protect oneself

and punish transgressors. In return, the authorities agree to protect their property and show due concern for their well-being. As discussed by Loader and Walker (2001), the modern state uses the power of the police to secure the order that is essential for having a functioning society and also to make it possible to govern a particular territory. The need for a good relationship between citizens and the police becomes evident at this point.

There are several studies that investigate the relationship between the police and citizens from different angles, with most of them acknowledging the importance of having a well-functioning relationship with the citizenry in order to conduct successful police work (Kääriäinen & Sirén, 2012; Skogan, 2006). Communication and social skills are important requirements since contact situations are frequent in police work. The nature of the contact varies and the complexity depends on several factors. Police officers are in contact with citizens who want answers to general questions, but also with citizens who break the law or citizens that are victims of crime. The citizens are not a homogeneous group, but have different backgrounds with respect to ethnicity, gender, age and other demographic variables (SOU, 2007). Empathy, defined as the ability to understand the perspectives of others, has proved to be an important skill in police work, especially in difficult contact situations (Pettigrew, 2008).

When discussing the requirements for the police profession, it is important to keep in mind that the requirements encompass several different fields. Previous research suggests that when selecting candidates, the requirements can be divided into two aspects: the candidate's character and the candidate's practical qualifications (Perez, 2010). Good character is hard to define and evaluate in comparison to qualifications more commonly evaluated, such as intelligence, level of education or practical skills. Some of the most crucial character values are *courage*: a police officer must have the courage to interfere in situations that involve some form of risk. *Self-control*: a police officer must have enough control to be professional in extreme situations and avoid getting too

emotionally involved, which can result in an inappropriate response. *Honesty*, since police officers have to be trusted. Another important factor is *empathy*, since police officers who become overly cynical cannot adequately take other people's perspectives into account. A lack of empathy is not ideal considering the task of the police, and being able to handle contact situations involving different sets of difficulties is also important. *Integrity* is another factor important to police work; officers have to act in accordance with their own philosophy, as it is problematic to say one thing and act in a different way (Perez, 2010). *Common sense* is another example of one of the more vaguely defined traits of a good police officer (Sanders, 2008). The complexity of adequately defining and identifying each character value illustrates the problems raised about how to evaluate "good character".

When viewing the Swedish context and focusing on the discussion about the nature of a candidate's character, there are several documents that discuss the suitability or desired characteristics of Swedish police candidates. Documents of investigation within specific departments are referred to as Ds and documents concerning governmental investigations are referred to as SOU. These documents vary in their focus; some relate to catchwords, such as the fact that the police should be engaged, effective and available, while others focus on the importance of democratic values and specific work situations. They also focus on different stages of the police training, from being a recruit to becoming a police officer. During the training period, characteristics such as broad-mindedness, tolerance, compassion, honesty, harmony and being service-minded are desirable qualities (Ds, 1996). Later on, when becoming a police officer, the police force focuses on other things, such as a proper attitude towards life, a fair view of the law, good judgment and a stable psyche (Ds, 1996). How the police operate is also of importance. Instead of approaching the community in a reactive manner, policing requires community partnerships and proactive problem solving. This includes having contact with social institutions, such as schools and social

services. To perform well, police officers need to be outgoing, have the ability to communicate and be interested in people. Having an understanding of different social environments is also highly valued since the police often work in areas with cultural diversity. Having a good knowledge about the differences that are related to different ethnic and religious backgrounds and living conditions is also important (Ds, 1996). An interesting remark that highlights the importance of personal suitability in relation to educational competence is the proposal in (Ds, 1996) that Swedish police education should be studied at the university level. The report suggests that a recruitment process has to take place before letting cadets start their university studies. If this is not done, it can result in cadets passing their university studies but still not being suited for the police profession (Ds, 1996).

The report (Ds, 1996) presents a profile of the ideal cadet. It lists the following qualities: the applicant should be mature and self-confident, be able to manage stressful situations and have the ability to engage in positive encounters with others; the applicant should be able to communicate clearly in speech and writing and also have the ability to take another person's perspective in a given situation. At the same time, the applicant must have the ability to see difficult situations objectively and be able to apply humour to avoid disproportionately escalating the situation. Other required qualities are an ability to co-operate with others, being self-motivated and being able to contribute constructive and creative solutions for different problems. He/she should also be responsible, maintain good ethics and morals in stressful situations and be able to resist pressure and avoid the negative influences of co-workers (Ds, 1996). Later reports have emphasized the same qualities and underscored the importance of having good interactions with the citizens, especially since many citizens these days more often question encounters with authorities and especially the police and have a lower tolerance for disorder. Other areas mentioned have to do with the increasing segregation in certain neighbourhoods. The need for getting a more representative police force by recruiting applicants that are better representative of society in terms of gender, ethnicity and cultural differences is also a priority (SOU, 2007). Later reports suggest areas that need more attention in future selection processes, with one of them being the lack of control in discriminating between applicants with deficiencies with respect to their attitudes and values towards citizens (SOU, 2008). According to the report, applicants undergo the entire process and are difficult to exclude later on when they are close to becoming police officers. The report addresses the necessity of considering this aspect in future selection processes.

The selection process

The selection process is the process whereby the best candidates are identified from among those who are interested in the profession. This leads to a discussion about the difference between police applicants and the general population, one where the concepts, self-selection process and institutional selection process are central issues to consider (Gatto, Dambrun, Kerbrat, & De Oliveira, 2010). The selection process is initially driven by a self-selection process, which implies that people tend to select the environment that they expect will fit their own values and thoughts; this idea has been proposed by social dominance theorists (Haley & Sidanius, 2005). In other words, those people who find the police profession interesting and have values and thoughts that they expect will be valuable for the police organization are the ones that apply. In return, the institutional selection process calls attention to the fact that institutions will select applicants that best match their thoughts and ideologies (Haley & Sidanius, 2005). The interesting part in this process is when there are misfits in terms of what candidates expect to be important in the profession as police officer in relation to the police organisation's preferences. If these applicants are not identified during the selection process, there will be both costs and social and economic consequences in the longer run (Sanders, 2008). This is also a common problem influencing the design of the selection process, one that aims to keep out

the unsuitable cadets rather than select the suitable ones — *weeding out* instead of *selecting in.* This becomes a problem when there is a lack of consensus in deciding the desirable traits or skills for police officers. There is not much doubt that weeding out is easier then selecting in (Sanders, 2008). Another explanation for why weeding out is adopted instead of selecting in may have to do with how problems are processed. Actions to improve the selection methods are often initiated when the selection process is criticised in societal debates or official reports instead of being developed continuously from the perspective of validity.

It is commendable to consider what the different reports suggest regarding the future of police recruitment and act in accordance with the suggestions by producing research in the different areas pertaining to police work. The problem areas illuminated in the various reports mentioned above will most likely vary between countries since police selection procedures differ in different contexts. However, even though perspectives from other systems are always valuable, it is important to consider the actual context. Research on the selection process is often requested. For instance, Skogan and Frydl (2004) state that in the United States "recruitment and training are among the most important activities of police organizations, and more needs to be known about their role in ensuring effective and lawful police conduct; the committee therefore offers a strong research recommendation along these lines" (Skogan & Frydl, 2004, p. 4). One of the issues in the Swedish context is the massive interest in the profession and the strong competition for the available places. In 2011, there were 9008 applications for 376 cadet positions.

Arguments for empathy

When viewing the desirable traits or skills of future police officers, there seems to be a priority in searching for individuals with an understanding for police work at different levels. If using the concepts of the macro, meso and micro level, the police organization operates on all three levels.

Successful contact situations are important at all levels. At the macro level, relations between institutions and police officers should contribute to good cooperation. The operative way of conducting police work includes maintaining good relations with several different organizations, such as schools or social services. At the meso level, the police organization and the culture within the organization, the police officer, should be active in supporting and assisting the organization in reaching its objectives. The documents (Ds, 1996; SOU, 2007; SOU, 2008) emphasize the changes that are taking place in society; future police officers are required to be open to such changes, for instance in the area of ethnic diversity among the citizens and within the police organization. At the micro level, the street level, police officers are requested to interact with citizens in a way that will increase their trust in the police. The essence of good police work is to have good contact situations with the citizens. Police officers must have the ability to handle stressful situations and at the same time to maintain good communication with citizens as well as their co-workers. The candidate will receive training at the academy to achieve this competence, but initial abilities such as being able to take into account another person's perspective and being able to manage stressful situations while maintaining critical distance will facilitate this process. Both of these abilities are associated with empathy (Gerdes et al., 2011).

The next part of the paper will focus on the concept of empathy in an attempt to identify a theoretical model that is suitable for the police profession.

The conceptualization and theoretical history of empathy

The term *empathy* derives from the Greek words *en* and *pathos* and means to express some sort of emotion (Holm, 2001). E. B. Titchener (1909), a British psychologist, introduced the term empathy into the English language. It was a translation from the German term *einfühlung* used by Theodor Lipps, a German philosopher (Davis, 1996). Einfühlung refers to the German sense of

aesthetics, a process where an observer can project him/herself into an object of observation. As aesthetics is an art of philosophy that deals with a critical reflection on beauty, art or taste, the project of observation usually involves a physical object of beauty. Lipps used the term einfühlung in a psychological context to refer to a process where an inner imitation takes place when a person observes another person; the observer experiences the emotional state observed in the person of observation in a weaker form (Davis, 1996).[10]

Compared to sympathy, which is translated as "with suffering" (Wispé, 1986), empathy is a newer term and considered more active. A cognitive process takes place where the observer can step outside of herself or himself; this opens up space for new theoretical standpoints (Davis, 1996). Wolfgang Kohler (1929) was a pioneer along this theoretical path and focused more on *understanding* others´ feelings instead of just *feeling* others´ feelings (Davis, 1996). In this view, the process of affective sharing is only a part of the empathy concept. Several theorists have illustrated the focus on the cognitive process. George Herbert Mead (1934) emphasized the importance of an individual's capacity to understand how other individuals view the world, a necessary ability that is central to functioning in a social world. Later views on empathy have been influenced by these ideas; some focus more on the affective part, while others focus more on the cognitive part.

The definition of the concept of empathy has had an ambiguous history, which has resulted in two paths. One path views the lack of consensus as a problem, while the other sees it as an advantage, where researchers from different disciplines can come together under the empathy concept, as argued by Johansson (2004). Discussing the perspectives of different disciplines can help to clarify the ambiguity of the concept. Gerdes (2011) describes how the different definitions depend on discipline-specific perspectives. Developmental psychology focuses on the observer's unconscious and automatic processes, while social psychologists and social workers focus more on the observer's cognitive processes and the actions taken. There is also a difference depending on the discipline through which empathy is studied: the social psychology perspective regards empathy in general contact situations, while the psychodynamic perspective concentrates on the contact between therapist and patient (Holm, 2001).

The definition problems have also resulted in empathy's being confused with sympathy. According to Wispé (1986), the two concepts differ in one central aspect: with sympathy, the suffering of the other is something that a person wants to alleviate, a feeling of compassion, the urge to help is present even if the observer is unable to help. Empathy is the attempt of a self-aware self to comprehend, without making judgments, both the positive and negative experiences of another self.

Contemporary theories of empathy and the police profession

When reviewing the different theoretical approaches to empathy with the requirements of future police officers in mind, it can be concluded that the theories within social psychology and social cognitive neuroscience offer the most suitable models for the police profession. In these approaches, empathy is identified as a necessary ability for positive outcomes in daily encounters within different contexts. The focus is on daily encounters instead of the deeper therapeutic encounter, which is the point of focus in psychodynamic theories. Recent research on empathy within social cognitive neuroscience, an interdisciplinary approach applied in social work, support the theoretical implications made in social psychology. Both approaches are interesting for the police profession because they regard empathy as being important for the type of contact situations that are common within the police profession.

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10 The terminology when referring to the individual experiencing empathy is observer and when referring to the individual being observed is target.

Social psychology

Davis (2006) presented a revised model of empathy in the *Handbook of the Sociology of Emotions*. The model presents a summary of empathy as a process or an outcome. The organizational model attempts to bring order to the different theoretical perspectives on empathy. There are four parts to consider: 1) antecedents, which respect to the features of the observer, target or situation that might influence the subsequent empathy experience; 2) different processes: a) a non-cognitive process, which is the tendency of an observer to automatically and unconsciously imitate the target's expressions, b) a simple cognitive process, where a person acts differently in specific situations according to an earlier experience, and, c) an advanced cognitive process, which is a process illustrated by the use of language, an association triggered within the observer when a target expresses a bad experience without any facial expression; 3) intrapersonal outcomes, which are cognitive, affective and motivational outcomes within the observer as a result of exposure to the target and which are not manifested in the observer's behaviour towards *the t*arget; 4) interpersonal outcomes, which are behaviours directed at the target depending on the earlier process (Davis, 2006).

Social cognitive neuroscience

The latest research on empathy comes from the field of social cognitive neuroscience. It integrates cognitive neuroscience with theories from the social sciences (Gerdes et al., 2010; Gerdes, 2011). The strength of this research is that it provides a more unified understanding of the theories of empathy. Social cognitive neuroscience has contributed to an understanding of how mirror neurons and neural networks can enlighten the process of empathy by considering empirical findings that can be observed in brain activity (Gerdes & Segal, 2009; Gerdes, 2011). Briefly described, tests performed with functional magnetic resonance imaging (fMRI) have shown that a person observing another person will experience an "in person" simulation of the other person's behaviour

and emotions. In this view, the experience of empathy has been defined as beginning when communication is established, by picking up the other person's signals. Three other processes follow: self /other awareness, perspective taking and emotion regulation. All components are needed simultaneously to experience empathy (Decety & Moriguchi, 2007). The model takes into consideration the broad agreement among scholars on three processes: 1) affective response to another person's emotional state, 2) the cognitive capacity to adopt the other person's perspective, 3) a working mechanism for self- regulating one's own emotional state (Decety & Moriguchi, 2007).

The combination of neuroscience with social sciences and social work practice has led to a further development in the theory so that it now includes the propensity of external actions taken by the observer to experience the full extent of empathy. The empathy experience must include something outside the observer's experience. The social work perspective adds the term *social empathy* (also termed empathic attitudes) to conceptualize the observer's ability to understand the circumstances of other people's living conditions when considering factors such as education, health or socioeconomic status (Gerdes et al., 2011).

Evaluating the components of empathy in relation to the police requirements

The theoretical models give guidance on how to understand empathy, and Davis's (2006) model describes both the process and the outcome of expressing empathy. The social cognitive neuroscience presents the different components necessary to experience empathy. Next, each component will be evaluated in terms of its relevance for the requirements for future police officers and how it is manifested in police work.

1. Simulation of another person's behaviour and emotion

The simulation of another person's emotional state has been a central and initial part of the empathy concept. Theorists from different disciplines have presented similar descriptions of how this process takes place. In social psychology, the process was initially described in terms of how an observer can project him/herself into an object of observation, as discussed by Theodor Lipps (Davis, 1996). Social cognitive neuroscience provides empirical evidence on how neural networks can explain this process (Gerdes et al., 2011). This constitutes an initial step within empathy and it is important to possess in police work. Being able to see a person's emotional state or understand the behaviour of another person is important for later decisions on how to act.

2. Self/other awareness

Self-awareness is the ability to identify with another person in a particular situation without confusing the self and the other. This goes back to an idea first proposed by Carl Rogers; he discusses perceiving another person's experiences as if one were that person, without losing the "as if" aspect (Holm, 2001). The boundaries between the emotions and thoughts of the self and the other have to be clear (Gerdes et al., 2011). There are two important aspects of this component according to the social cognitive neuroscience literature. One is the observers' (empathizers') ability to track the origins of the feelings triggered during the affective arousal phase and the other is the observers' ability to suspend his or her own experience in order to call up thoughts and feelings about others (Lietz et al., 2011). This process is useful in police work when writing testimony reports, as it is important to distinguish between the self and the other as a police officer. A police officer needs to let the persons involved in a situation give their testimony without getting affectively involved, while still showing an interest as an investigator. Within the requirements for police work, this indicates an applicant's ability to see difficult situations objectively to avoid disproportionate involvement (Ds, 1996, p. 11).

3. Perspective taking

The ability to take another person's perspective is often conceptualized as being able to understand how a situation appears to another person and how he or she will react both cognitively and emotionally (Gehlbach, 2004). This is a relevant component of police work; adopting the perspectives of others makes it easier to have contact situations where all participants experience mutual recognition and respect. Perspective taking is also known by the alternative term *role taking* (Esbjörn-Hargens, Reams, & Gunnlaugson, 2010). In role taking, the *self* develops through different stages, resulting in a reflective and conscious individual (Mead & Arvidson, 1976). A developed ability relates to an awareness of a police officer's role in a wider context, the role of the police in society and their relationships to other societal institutions.

4. Emotion regulation

Emotion regulation has several definitions. Some researchers focus on how the internal processes of memory or attention are organized so that an individual can react properly to situational demands. Others focus on how emotions are regulated when considering specific situational demands in terms of how a person monitors, delays or adjusts his or her emotions. Some researchers combine both aspects (Cole, Michel, & Teti, 1994). A workable definition for emotion regulation is "the ability to respond to the ongoing demands of experience with the range of emotions in a manner that is socially tolerable and sufficiently flexible to permit spontaneous reactions as well as the ability to delay spontaneous reactions as needed" (Cole, Michel, & Teti, 1994, p. 76). When discussing deficits, it is more accurate to discuss emotional dysregulation than a lack of regulation. A dysfunctional system comes about when unexpected feelings dominate expected feelings. Emotion regulation is a complex cognitive process where the focus is on the capacity to regulate emotions caused by the situations that the observer is facing. One particularly powerful emotion regulation strategy involves changing

the way a person thinks in order to change the way the person feels (Lietz et al., 2011). A properly developed emotion regulation ability is valuable within the police profession because it is related to an applicants' ability to manage stressful situations and see difficult situations objectively. The fact that police officers are exposed to difficult situations is an acknowledged part of the police profession. A lack of this ability can result in problems, such as stress and burnout, which in turn may lead to further consequences, such as intensified irritability or impaired judgment (Arter, 2007; Ivie & Garland, 2011).

5. Empathic attitudes

The underlying assumption when including empathic attitudes is that a person who is supporting a set of socially responsible attitudes is more prone to take action in an empathic way. According to the process proposed by researchers, a person experiences a particular situation, processes it and takes empathic action (Gerdes et al., 2011). Social work practitioners often suggest that there is a relationship between empathy and pro-social behaviour (Lietz et al., 2011). This way of thinking coincides with recruitment criteria within the police profession, as there are demands for an improved understanding of different social environments and for adopting more democratic attitudes. Police officers today work in areas with diversity concerning ethnicity, living conditions and religious background. When adjusting the components of empathy for the police profession, empathic attitudes should be directed towards the ones focused on in the documents describing police requirements. Areas of particular interest are attitudes regarding different social environments, the legal system, the ethnic background of people or views on authority.

Discussion

The main purpose of this paper was to identify and develop a theoretical model for empathy relevant to the police profession useful in areas such as the recruitment of police officers. This was done by analyzing documents describing requirements for the profession and by reviewing theoretical conceptualizations of empathy. Two questions were initially posed.

The first question was: In what sense is empathy a required ability for police officers according to the research findings and specified requirements in the existing documents? It was discovered that there are several required abilities that can be connected to empathy. Having the ability to take another person's perspective is an explicit requirement for becoming a police officer (Ds, 1996), and this is a cognitive aspect in several perspectives on empathy. Implicitly, there is also the need for police officers to understand the role of the police in a wider context by cooperating with other societal organizations. Another interesting, explicitly expressed requirement is the ability to see difficult situations objectively to avoid disproportionate involvement . A deficiency in this ability may manifest itself in stress and burnout, resulting in irritability and bad judgement in contacts with citizens (Arter, 2007; Ivie & Garland, 2011). Such behaviour is directly opposed to the requirement of having the ability to maintain good ethics and morals in stressful situations (Ds, 1996). The theoretical components of empathy include cognitive processes that facilitate the ability to see situations objectively with components such as self/other awareness or emotion regulation.

The fact that empathy has been conceptualized differently in different disciplines opens up space for the second question: How should a theoretical model of empathy be constituted that is best suited for police work? The models within social psychology and social cognitive neuroscience research are the most interesting. The model from social cognitive neuroscience has been developed and applied in social work, a profession more closely related to the police profession than professions in the caring practices. Contact situations in police work are more similar to an encounter between a social worker and client than to a therapist–patient encounter. Even if empathy is a process consisting of several steps, one in which all steps are needed, each step is considered relevant for the police profession. The contribution

of social work is to consider the context and add empathic attitudes to the model. Empathic attitudes are interesting when considering the more implicitly regarded requirements. Future police officers need a set of attitudes that correspond to the role of the police in several areas (SOU, 2007).

The next question of relevance is how to measure empathy. In both approaches discussed above, there are instruments that measure each component in order to capture the theorized dimensions of empathy. The proposed dimensions are affective, cognitive and behavioural (or intention to act). More practical questions have to do with strategies suited for measuring empathy in real settings. There are several constraints to be aware of in the selection process for the police. Procedural and organizational facts, such as the large number of applicants tested within a short period of time, affect the selection process. Empathy can be measured by conducting interviews or by using an instrument that gathers self-reported information. The interview is a popular and often-used approach in the selection process (Cliffordson, 2002), while self-report instruments make it possible to gather information from more respondents. Both approaches have problems, though. Interviews are more expensive, whereas with self-reported instruments there are no guarantees that all of the respondents understand all of the items as intended. The social desirability aspect is also a problem acknowledged in both approaches in selection settings. In the current Swedish selection process, the character of the applicant is evaluated via an interview, which weighs most heavily in terms of the decision for acceptance (SOU, 2008). The focus of the interview is on the applicant's life experiences, values and general suitability for the police profession. During the interview, there is a great deal to cover in a short amount of time, and complementing information would be of value to the recruiting team, the applicants and society.

The conclusions of the study are that the theoretical conceptualization of empathy should be considered adequate for the police profession. The theoretical conceptualizations of empathy within social psychology, and the inter-disciplinary social science research with findings from social cognitive neuroscience, offer interesting alternatives on how to measure empathy. Existing instruments within these disciplines include the widely used Interpersonal Reactivity Index (IRI) and the Empathy Assessment Index (EAI), both of which acknowledge the multidimensional aspects of empathy. The next step in this research project is to evaluate these self-report instruments in the intended setting to develop an instrument that measures empathy in a valid and reliable way for the police profession. The theoretical guidelines presented in this paper are a first step. It is, however, important to remember that measuring empathy is only one isolated aspect of a candidate's character and the results are intended to contribute to the information gathered during the selection process and not to be used as sole evidence when making a decision about acceptance.

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7 SIGNS OF CRIME: INVESTIGATING THE SEEN OF THE UNSEEN

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Introduction

Police science is traditionally based on criminology; how to prevent and suppress criminal activities, often by proposing new and improved methods and knowledge for handling social disturbances. Consequently, there seems to be an expanding interest in developing evidence-based knowledge that is generally applicable to professional police activities, such as police investigations at crime scenes. With a few exceptions (e.g. Elmqvist, 2009; Wertz, 1985), there seems, however, to be a lack of phenomenologically inspired police research addressing questions such as: What is the nature of policing and how can we understand policing from the professionals' life world perspective?

This article will address the importance of the "sign" as a fundamental phenomenon of making meaning of the world. Patrolling police officers, "being first at the scene", act very much in an "investigative space" or a "virtual space" (Kvist, 2008), where the world presents itself as "structures in disguise" (Lai, 2004). From this perspective, police investigation is basically a matter of making sense of the unseen in light of the seen, a matter of interpreting the concealed meaning of signs, which involves intuition and imagination rather than observing things at face value.

An example of a lived police experience

Thursday, 5 May 2011. 01:20 (a.m.)
A male senior police officer is driving a patrol car on a dark road in the countryside. Suddenly, he pursues a dark, muddy-looking car with dim red rear-lights.

In the darkness I can see a burning object, presumably a cigarette, being thrown out of the front passenger's side of the car ahead of us. The senior officer says: "There are…" The male police officer trainee finishes the sentence: "… two persons in the car". (Field notes, 4/5-2011)

This short field work observation might be considered a mundane everyday experience involving two officers, one of them an officer trainee, observing and commenting on a matter of little importance. Throwing things from car windows is a normal occurrence in traffic. However, from the perspective of police perception it might be accounted for as valuable information involving a complex structure of meaning in policing and training, searching for and acting upon signs of a concealed world.

Setting the scene for research

My research is based on ethnographical fieldwork conducted in a period of 4½ months while observing and interviewing principally four police officer trainees and their colleagues and supervisors; this was done while patrolling the streets of smaller cities and the countryside in a rural police district in Denmark.

From the outset, my research is from that of an outsider position trying to understand and describe police training as an evolving and transformational learning process within a social setting. However, being present at actual police work situations, making field notes and interviewing the police officer trainees involved in the process has given me a glimpse into the "inner" world of police work and training. Doing fieldwork with the patrol units, I came close to actual police work situations, which I believe has provided me with a possible bridge to understand the shaping of a police identity among the police officer trainees from the "inside", assuming that we were having similar, yet not identical experiences.

By applying a phenomenological un-

derstanding of policing, the task is to describe the lived experiences of the professionals themselves. It involves a specific ontological and epistemological approach to the research presented below.

The phenomenological approach

The German philosopher Edmund Husserl (1859-1938) founded phenomenology as a basic critique of what can be referred to as "crises in science" (Husserl, 1970, 1977), when scientific concepts do not correspond to the phenomena of everyday life. With his famous saying, "*To the things themselves*", Husserl wanted to turn philosophy and science towards an inquiry of objects in the world beyond their physicality and to develop a particular philosophical consciousness, often referred to as a "theory of mind"; as he puts it: "*consciousness is always consciousness of something*". Phenomenology is, fundamentally, a search for the essences of "things". The basic assumption is that every conceivable object and subject — as well as their interrelationship — has a meaning in and of itself and searching for this meaning will lead us to understand the world and our place in it better and allow us to get in touch with the world and its inhabitants from an inside position.

The French philosopher Maurice Merleau-Ponty (1908-1961) basically agreed with Husserl on his critique of the contemporary philosophy of science (Merleau-Ponty, 1962, 1963, 1968- please delete these references, since M-P doesn't put forth a critique on this matter in these particular books). On the one hand, he strongly rejected *empiricism* (positivism, behaviourism, evidentialism, etc.) and the tendency to base research on systematic scientific methods and causal explanations. One the other hand, he rejected *intellectualism* (subjective theorizing) and its claim to pure thinking and abstract theory. Both views maintained an objective and dualistic view of human beings in the world, presuming that scientific investigation is independent of lived experiences and of the life-world itself.

Merleau-Ponty's project was to return to a pre-scientific or pre-reflective way of thinking, as "the world is always 'already there' before reflection begins" (Merleau-Ponty, 1962, p. vii).

By introducing the body, Merleau-Ponty departs from Husserl's theory of mind, suggesting that a human being fundamentally acts in pre-conscious ways. Drawing on gestalt-psychology, Merleau-Ponty suggests that human experience is not capable of grasping the true nature of the world in all its plenitude and complexity since objects as they are presented to the consciousness do not exist in the same way as they are experienced. We therefore have to separate *appearance* (how things present themselves) from *existence* (how life is lived) and *essence* (how things basically are). The body corresponds to the conditions of the particular situation in which a person is involved. And it responds to the surroundings not by instinct but through meaningful intuitive actions embedded in lived situations, which might, but do not necessarily, correspond with conscious thinking.

The intentionality of the body

According to Merleau-Ponty, people's existence is grounded in the body and in their involvement in the world. The body is far more than a biological mechanism responding and adjusting to external stimuli. The body and the world are intertwined in such a way that the body will always intentionally move towards fulfilling its inner meaning, depending on the perceived situation. The concept of "intentionality", therefore, does not refer to an act of pure consciousness or a result of intellectual rationality separating man from the world. It refers to a pre-conscious directedness of the body towards specific situations that demand specific actions. Beneath or around what is actually seen, heard and felt there is a vast amount of information that does not reach human consciousness but that is embodied as concealed processes in the body. Merleau-Ponty speaks of hidden "horizons" of the world embedded in our natural perception as pre-conscious structures. The body responds to the hidden messages and signs of the world in a pre-reflexive manner by means of tacit

knowledge and intuition.

By moving the body in the world, the body is — on a pre-reflexive level — acknowledging the possibilities of potential actions in the world; it is responding to other persons, to objects, to the material and spatial conditions of the situation, and in a wider perspective, to the world. This means that perception is not only a conscious directedness from the subject as an inside-out movement. Perception is, simultaneously, a pre-conscious attitude towards the world of signs from an outside-in movement, such as when the world "acts back". Or, as Merleau-Ponty puts it: "We must discover the origin of the object at the very center of our experience (…) there is *for us* an *in-itself*" (Merleau-Ponty, 1962, pp. 82-83, emphasis in original). In this process, the body is intuitively directed towards the invisible inner meaning of the sign in-itself. Perception is, thus, created in the fusion of both perspectives, e.g. to see and be seen, to talk to and to be talked to, to act and to be acted upon, to give an experience a name and to experience the meaning of the substance behind it, and so forth. The reason why we can respond to the invisible in a pre-conscious manner is because we are intimately related to the world and its inhabitants:

> *"It is through my body that I understand other people, just as it is through my body that I perceive 'things'. The meaning of a gesture 'understood' is not behind it, it is intermingled with the structure of the world outlined by the gesture, and which I take up on my own account"* (Merleau-Ponty, 1962, p. 216).

Gestures, then, are signs of meaning that we can relate to in an intuitive manner because we are intimately bound to the same world in which they appear. We hear words, we see gestures and we feel sentiments. When we see a gesture, such as a smile, we see certain movements in the face. However, the message behind the smile is a matter of interpreting the hidden message or meaning of the gesture. Or, as Merleau-Ponty says: "The sense of the gestures is not given, it is understood" (Merleau-Ponty, 1962, p. 215).

The phenomenological inquiry

The world is fundamentally inexplicable since we, as humans, are not capable of grasping the true nature of things. We only perceive the world through a limited perspective. Therefore, we must be critically aware of our severely limited ability to find the true meaning or essence of the world. In order to understand the world and the objects we are researching or investigating, we must, metaphorically speaking, realize that we are merely seeing the footprint of a giant: with the footprint being our perception of a sign and the giant being the world.

However, through a multi-perspective approach based on a rigorous investigation of what is behind and beyond appearance (the gestalt), we might come closer to an understanding of the phenomenon in question. We do this not by stating valid facts, but by presenting phenomenological descriptions through which we *may* reach a higher level of understanding grounded in our lived experiences. I emphasize "may" because the search for meaning is a never-ending performance. Though we might never grasp the true meaning of our existence in the world, we are closely linked to it. We understand far more than is intellectually grasped and spoken of with a word. This is the very point of departure for any phenomenological inquiry. I suggest that this holds true for police investigations as well. My phenomenological approach presumes a special view of the world, which I will now attempt to apply to the world of policing.

Turning to the world of policing

Police officers on patrol act in a world that is constantly changing; just as the things, subjects and their movements and interrelationships are always changing. What might be perceived as a well-defined police situation with certain anticipated boundaries in time and place, such as *securing, enclosure* and *partitioning* (Kvist, 2008), is — in a phenomenological sense — not the case, as every situation conceals a vast amount of information. The true nature of the world is basically hidden; several ac-

tions have already taken place before the officer arrives on the scene and the potentiality of actions with respect to the situation at hand and also beyond the situation in question are unpredictable. Therefore, there is no fixed point by which *the* meaning can be applied to any given situation or event. The meaning is hidden in signs. However, searching for signs and acting upon them might be a clue for facilitating a basic understanding of what has happened, who is involved and why this might — or might not — be of relevance for further police actions.

In the following section, I will return to the brief fieldwork observation presented at the beginning of the article and present an analysis based on my phenomenological approach as outlined above. I will add more data from the incident and bring in data from other parts of my fieldwork as I go along. You might want to go back and reread it before moving on.

The cigarette

The burning object — presumably a cigarette butt — catches the police officers' immediate attention the moment that it is thrown out of the car window ahead of them. They both *see* the burning object and locate the very point from which it was thrown. They presumably *assess* the "normality" of smoking behaviour inside a car: how to get rid of a burning object from the perspective of, for example, safety reasons. They thereby *conclude* that the best way to get rid of burning objects due to safety reasons — if not by using the ashtray inside the car — is to dispose of them through the nearest exit, which is the window next to the smoker. However, it is neither the burning object itself nor the fact that is thrown out of the car window that seems to be important, since it is not indicative of a criminal action *per se*. What catches the attention of the police officers is revealed by the sentence "*There are… two persons in the car*". Note that the first part of the sentence is uttered by the senior officer, while the second part of the sentence is completed by the police officer trainee. Hence, they share the same visual experience and, via a tacit negotiation re-

garding its implicit meaning, the relevance of the statement becomes unquestionable as an important police matter.

The burning object is a *sign.* It points to a matter of greater value as "an indicator of that which it is evidence *of*", since it refers to "one thing that points beyond" (Kelly, 2003, p. 23). The sign points to the presence of a (yet) unseen person throwing the burning object out of the car. In this process, the officers depart from logical reason, observing the "seen" world, and use their imagination and intuition in a virtual, "unseen" world. Or, stated differently, they move from vision to visualization. In order to do so, they have to "dissolve their own selves" and move their bodies into a virtual space (the pursued car) where vision itself cannot penetrate. However, the virtual space is closely linked to observable reality, since the seen object (the sign) has left a mark of a hidden horizon that will need to be further investigated.

The car

What happens next is that the senior police officer closes the distance between their car and the car ahead of them and the police officer trainee types the registration number of the license plate into the hand-held computer that is linked to a national police server. The senior police officer asks: "*Is there anything on him?*" I cannot hear the answer, but shortly afterwards the senior police officer turns on the police lights a few hundred metres from a parking lot beside the road at the top of a hill. The car slows down and stops at the parking lot. When we stop, I notice that the car has dark tinted windows and the license plate is yellow (which means that no passengers are allowed in the rear seats of the car).

Even though the patrol unit had not expected to meet *that* particular car at *that* time of night at *this* location, they had, however, anticipated the meeting in general terms. Patrolling officers generally look for specific signs that stick out as figures against the general background of "normality", asking questions directly related to the car in question. These questions have to do with *time* and *place*: What is this car doing here at this particular time

of the day? They have to do with *movement* and *speed*: Why is the car driven in such a manner? They have to do with *direction*: Where did it come from and where is it heading? They also have to do with *the general appearance of the car*: Why does it present itself in this way, in terms of, for example, car model, age, maintenance and such equipment as banners or spoilers? Finally, the questions might also have to do with *the driver:* What are the movements, gestures, posture of the person in the car? Some vehicles are "filtered out" and dismissed as irrelevant for further action, e.g. by stating "it is a normal car", while other cars are "filtered in", which might involve taking further action. In this particular incident, the car ahead was "filtered in". An interesting aspect here is that the officers seem to perceive the car as an extension of the driver's body. The car, thus, becomes the fulfilment of a certain intentionality in the world, as revealed through the figures of normality listed above. These are all signs about the driver *in* the car, or stated differently, of human intentionality, whereby the driver is employing the car as his way of manifesting himself in the world at this particular moment.

The patrol unit was not notified about the presence of the car they were about to pursue; it just turned up in front of the police car. Several pieces of information seemed to be involved in the decision to stop the car and they stem from different sources of knowledge. First, the impression of the car being driven at this particular time of night, the colour of the license plate and the overall physical condition of the car may have triggered the officers' suspicion. Second, the database search on who owns the car and on the owner's criminal record might have given the police officer a clue of what to expect before confronting the driver. However, the driver in this instance might not have been the actual owner of the car (delete this sentence) In this particular incident, the driver did not own the car. However, there must have been a relation between the owner and the driver or else the car might have been reported as stolen. A third aspect was a prior directive from police headquarters to patrolling officers to be especially alert for persons related to biker organizations,

as there was at that time a power struggle going on between bikers and ethnic gangs in the area.

Overall, these pieces of information could be understood as belonging to a larger "web-of-significance" (Geertz, 1973, 1983); but how the web is construed and acted upon in this particular instance involves a complex situational involvement responding to other signs of importance uncovered by gathering information before the actual encounter. In the actual situation, there were not just two persons in the pursued car, as had been presumed. There were in fact three persons in the car, as the police officer later mentioned to the driver. This could not have been predicted. However, due to the information given by the burning object *itself*, the police officers had anticipated the potentiality of the situation and directed their bodily movements accordingly: both of the officers stepped out of the patrol car and approached the car from both sides, while directing their flashlights inside the car. They were taking precautions because of the sign of the burning object. I will turn to this now.

The other

The really important question is: Why is it relevant to know that there were (at least) two persons in the pursued car? The senior officer referred to the incident in an interview a few hours later:

> *"It (the cigarette) tells us that there are possibly two persons in the car, and that is important for us to know … because then we can prepare ourselves … we then have to cope with two persons … our security and force depend on being one step ahead and in that moment we are … in spite of the darkness and the fact that we cannot see into the car we then know that there are two persons."*

By means of the sign of the cigarette, the officers *prepared* themselves in a specific manner. Both officers stepped out of the patrol car while flashing their Maglite flashlights inside the car from both sides as they moved along the side of the pur-

sued car. On the one hand, their presence was a subtle sign of power directed at the persons inside the pursued car ("there are two of us"). One the other hand, it was a tacit message between the officers themselves as a matter of caution ("we are close to one another in case things escalate"). The normal procedure would be for one of the officers to stay inside the patrol car in case the pursued car would suddenly accelerate and try to get away from the place, resulting in a chase and attempt to catch the other car. In this instance, however, the senior police officer — due to the sign of the cigarette and other sources of information obtained *before* confronting the driver in the pursued car — acted differently than normal. Both officers directed their bodies according to the hidden meaning of the sign, signifying an implicit message of caution.

In the actual encounter, it turned out that the driver was already known by the police. Note that the driver and the owner of the car were not the same person. When confronted with the police, the driver smiled. But the smiled was odd. It was not a welcoming smile, signalling a willingness to cooperate with the police, as was confirmed by the fact that he did not want to present a valid driving license or some other kind of valid identification. Neither was it a weak smile of submission and apology, as his general posture seemed at ease with himself. The quality of the smile was possibly revealed by four tattooed letters on his knuckles: ACAB, an abbreviation for "All Cops Are Bastards". This mark on his body was a sign in and of itself. The smile seemed to indicate recognition, as if he had been in this situation before, and therefore had anticipated, even though not expecting it here and now, an encounter with the police. In a general sense, the hidden meaning of the smile seemed to be the potential use of force and power — at least resistance — against the police had he been in control of the situation. The fact that there were two extra persons in the car seemed to add to his presumed self-confidence, as indicated by the gesture of a smile.

In the end, the senior police officer charged the driver for driving without a valid driver's license, and the passenger in the backseat was similarly charged for being in the backseat as a passenger. However, of greater importance was the information that they recorded: that the driver was a member in a biker's club, "Bandidos", and that the passengers in the car perhaps were involved in criminal activities presumably related to this organization as well. In the broader picture, the catch was important because it added to the information systematically being recorded on people linked to this organization, even though the actual charges in the specific episode were minor.

Back to the matter of the cigarette. The sign of the cigarette might be regarded as a kind of "self-fulfilling prophecy", since its innate meaning corresponded with the "hunch" that the police officers had to start with and which developed throughout the string of actions. It revealed that there were at least two persons in the car, making the senior officer and the trainee feel as if they were a "step ahead" and in control. In control not only with respect to the persons in the pursued car, since their actions signalled power and authority, "we know who you are and there are two of us", but also in control in terms of successfully assessing risk and security as an integral part of their job. And this is a matter that must be learned.

How might this incident be important to police work and training in a more general perspective? First, I want to emphasize that this minor fieldwork experience is only part of a larger amount of material to be analysed. Therefore, the next and concluding section is only tentative and experiential, summing up the situational analysis thus far.

Police work and learning

When entering a relevant police situation, the police officers' body movements depend not only on observations linking information gathered from the police server's recorded database to a certain person. The recorded data, e.g. ownership of a vehicle, only gives a general picture, which might or might not be directly applicable to the actual situation. What really matters is the bodily sensed involvement

in the situation — being alert to signs that might reveal pertinent meanings that are not directly observable and therefore not predictable as causal explanations.

The signs are concealed, since crime often cannot be grasped in the situation at face value. The police officers might see only appearances of crime, not the phenomenon of crime itself. In the world of professionally relevant signs, what the patrolling police officers see are signs of negatively interpreted human actions, which they perceive as "figures" that stick out against a background of normality. Crime itself can be referred to as an "empty form" that is "set up *behind* the phenomena, *before* the phenomena manifest themselves, *in order* for them to be manifested" (Kvist, 2008, p. 153, referring to Latour, 1999). In addition, crime is, by its very nature, intentionally concealed by the perpetrator, with the hidden information of the object or a string of social events and actions before the actual encounter involving the presence of the patrolling officers. In that sense, the relationship between the world of policing and the world of the criminal is in its very essence an antagonistic relationship where the parties have opposing interests and motivations. Yet they are intimately bound, and in a strange sense, mutually dependent on each other. The criminal deed is dependent upon the notion of a law being broken. And the task of policing is dependent upon a criminal action performed as a breaking of the law. In a further perspective, the perpetrator wants to hide the deed, while the police try to seek and find the signs revealing the deed. This is often referred to as a "game" (Holmberg, 1999a, 1999b) or a "play" (Carlström, 1999) in police research literature.

In order to reveal the sign of crime, the police officers develop a suspicious attitude or a "police lens" (Finstad, 2003) as a special way of perceiving the world. This attitude is very different from a normal, common-sense perception of the world, since it refers to a basic antagonistic relationship to the world of crime and a complex relationship to what might be called a "game of hide and seek". The suspicious attitude is, however, not only directed inside-out, that is, from the consciousness of the officer towards the world. As suggested, the world acts back and therefore suspiciousness is basically a professionally motivated search for meaning, one that imagines the world of crime from an "outside-in" perspective. Taken as a whole, both processes are intertwined. They can be regarded as both sides of a coin, so to speak. In that sense, the suspicious attitude becomes innately meaningful in establishing what might seem to be a paradoxical relationship to the world. However, in a "game of hide and seek" it makes sense.

In order to develop this suspicious attitude, the police officers must be open-minded to the world and try to look at its objects from different perspectives in time and space. This multi-perspective attitude also involves taking a critical stance towards "false clues" since criminals deliberately deceive the police and "fabricate" false evidence. Therefore, one's own view of the world must be carefully assessed in accordance with the criminals' intentions, motivations and actions, as signified in the "true" sign. Or, stated differently: what the officers see is not always what they are looking for. The purpose is to reach an understanding of the object as seen from within it-self, while responding to questions such as: What is the basic structure of meaning behind and beyond the appearance of a "thing"? What relevant signs need to be investigated further? What actions should be taken when the course of events are different than predicted? The latter question involves an attitude of readiness to change one's mind when the innate meaning of signs turn out to be different than "objectively" perceived.

The analysis suggests that police identity is multi-directed and unpredictable in its nature and that it develops as part of an ongoing learning process of perceiving the world and responding to the conditions of the experienced real-life encounters in which professional action takes place. Merleau-Ponty puts it this way:

"Learning does not appear to be the addition to old forms of behavior of certain determined connections between such and such stimuli and such and such movements, but rather to be a general alteration of behavior which is manifested in a multitude

of actions, the content of which is variable and the significance constant (…) Thus, to learn never consists in being made capable of repeating the same gesture, but of providing an adapted response to the situation by different means. Nor is the response acquired with regard to an individual situation. It is rather a question of a new aptitude for resolving a series of problems of the same form." (Merleau-Ponty, 1963, p. 96)

As suggested by Merleau-Ponty, learning is a transformative process of adjusting and adapting the body to the conditions of the situation in question.

In a more general sense, learning to become a police officer is a way of perceiving the world in a "police-like" manner that differs from a common-sense understanding of the world. The police officer trainees have to pay attention to the world in a different manner, to understand the meaning of signs in places, objects and people and to move their bodies in accordance with the potentiality of the unpredicted outcomes of any given situation. Any outcome for a given situation is basically unknown since the course of events is essentially unpredictable; the police officers never know what will happen next. Importantly, however, the trainee has to learn to be in control and to know when to make a move, and, if so, how to make it thoroughly. I suggest that this control is a matter of being maximally adaptive to any unforeseen events that might occur. Being suspiciously alert and attentive to signs of meaning, such as the cigarette, is an example of seeing the unseen in the scene.

The episode with the cigarette might count as an example of the things mentioned above as the trainee demonstrates his or her growing understanding of a police-like way of knowing "what to do" and "how to see" the world of signs by verbalizing the potentiality of their relevance.

As the analysis suggests, an important part of police training in practice is to acquire a method of visualizing the course of events leading up to the present moment and adjusting one's actions according to the course of events. In this sense, being alert to the signs is a way of translating the world to the potentiality of things to come. Acting relevantly as a police officer is a matter of balancing the "task" (doing the job) by moving the body forward. Simultaneously, trainees have to learn to value their own and their partner's security (risk and danger) by the bodily grounded intentionality of stepping backwards.

This mode of bodily involvement cannot be grasped by means of causality but by an intuitively grasped sense of intentionality, one in which police officers apply multi-directed perspectives to a situation, including visualization, as a method of seeing the unseen. Standardized methods and procedures serve as indicative guidelines to be followed; however, within the flow of events they are constantly revisited and changed when the expected results in unintended outcomes as the world acts back in ways that are not predictable.

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8   POLICING LARGE-SCALE TAX CRIME

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Introduction: Organized crime in the legal economy

Both researchers and agency officials assume that is more profitable to commit economic crimes than it is to engage in traditional crime in organised forms, such as drug crime or smuggling offences (cf. van Duyne 2003; Skinnari & Korsell, 2006). The reason is that economic crime — and tax crime in particular — is committed within the legal economy. The offenders are therefore able to exploit legal systems for the purposes of their criminal activities, which reduces both their costs and the risks they face. This exploitation may, for example, take the form of using companies and financial firms to facilitate these crimes. In addition, the use of black-market labour need not be concealed, since the work conducted by such labour does not in itself constitute a crime — the tax crime occurs only later, when wages and revenues are not properly reported for the purposes of taxation.

As this article will show, however, offenders of this kind do face certain problems, since their activities must be concealed from the authorities. The issue of how law enforcement agencies can work to increase the costs and risks of the offenders constitutes the subject of this paper.

The paper is based on a research project published in an earlier report, Storskaliga skattebrott – En kartläggning av skattebrottslingens kostnader och risker (Brå, 2011:7).[11]

The objective is to describe large-scale tax crime, such as in the case of the organized use of black-market labour. Systematic VAT fraud and excise duty offences are also included. The cases examined here involve taxation amounts of several hundred thousand SEK, and sometimes several million. They also involve several individuals, with the principal actors having known one another and worked together for a long period of time. Accomplices are used, in particular, for the most risky parts of the criminal enterprise. The cases involve ongoing business activities, certain parts of which can be included in business accounts and taxed, whereas other parts take place completely within the black economy.

In Sweden, the work to combat tax offences is conducted by several different agencies. The most prominent is the Swedish Tax Agency, whose activities are divided into two parts. The fiscal section conducts, among other things, audits of companies where tax crimes might be detected. These tax officers can then pass cases on to the police and prosecutors, but the cases may also end up in the other section of the Tax Agency, which is comprised of tax crime units. Here, tax crime investigators conduct criminal investigations in collaboration with prosecutors and sometimes with police officers from the Economic Crime Authority. In those parts of the country where the Economic Crime Authority has not previously been active, there are economic crime units within the regular police and prosecutors are involved from the regular public prosecution office. The investigation of these crimes is very demanding, and a large number of different agencies can contribute to the policing of this form of crime.

Method

The methods used were interviews, analyses of tax crime cases and seminars (see Brå, 2011:7). Of the 136 people that were interviewed, many were tax crime investigators and tax auditors from the Tax Agency (59 individuals). All of them had worked for a number of years investigating compa-

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11 The report was authored by Johanna Skinnari, Klas Marklund and Lars Korsell.

nies and individuals suspected of being involved in large-scale tax crime. Several of the tax crime investigators have a background in auditing. Persons working at other agencies were also interviewed, including prosecutors, police and customs officers, as well as control investigators at the Social Insurance Agency. We also interviewed a number of accountants working in the private sector who focus in particular on fraud issues.

One risk associated with interviewing people who investigate offences is that they want to present a positive image of their own operations and thus conceal problems that may arise (Brå, 2012:12). Although it was common for the interviewees to argue that it is other agencies rather than their own that are unable to investigate these crimes properly, all agreed that investigations of this kind are difficult and that achieving convictions or rulings on tax surcharges requires a lot of hard work. They were all open about sensitive and difficult aspects of their own investigations. The central limiting factor associated with the interviews was rather that the interviewees had not previously thought about the crimes on the basis of offenders' costs and risks and therefore found it difficult to describe them.

For this reason, sixteen offenders were also interviewed. These offenders were able to fill in the gaps found in the other parts of the material. Some of the common objections raised against using offender interviews is that the offenders may have an interest in presenting themselves in a positive light, and may either exaggerate their significance for, in this case large-scale tax fraud, or play down the extent of their own offences (cf. Zaitch, 2002; Brå, 2012:12). By asking questions about strategies employed in connection with tax crime, the significance of their own crimes was played down and left less space for exaggeration.

The information provided by all of the interviewees has been balanced together, which means that specific interviewees have not affected the conclusions drawn. Everything in this paper has been corroborated by interviews with both agency officials and offenders and also by the tax crime cases examined.

Analysis of tax crime cases

The paper analyzes 75 case files. The majority of these cases involved the use of illicit labour, but approximately ten of them related to excise duty offences and VAT fraud, respectively. The cases either took the form of criminal investigations that had been conducted by the tax crime units or auditors' reports from audits conducted by the Tax Agency's fiscal section. Some of the cases included both types of documentation. In many cases, the case files were extensive, comprising several hundred pages. If an audit had been conducted, the files contained a great deal of information about the companies' costs, and the transactions of those involved had also been charted to some extent. In addition to this information, the criminal investigations could also include interviews with suspects and witnesses, which in certain instances provide answers about security strategies and payments.

In addition, three seminars were held with individuals from relevant authorities. At these seminars, preliminary findings and proposals for prevention measures were formulated and discussed.

Myths about large-scale tax crime

This paper examines three myths associated with large-scale tax crime. These myths were expressed by various agency officials who were interviewed or participated in seminars during the project. The problem with such myths is that they become an obstacle to policing tax crime in an effective and appropriate way.

The first myth is that large numbers of complex tax crimes have been initiated and planned by the same individual, a criminal mastermind, who is more or less untouchable. The second myth is that people who have previously been active in the field of traditional crime, such as drug crime and violent crime, are now moving into economic crime in large numbers. The third myth is the view that the authorities are too far behind the offenders. In the following section, these myths are dealt with and dismissed one by one, and conclusions are drawn about what this means for the policing of this type of crime.

Myth 1: A criminal mastermind

Large-scale tax offences are perpetrated by criminal networks. There are too many tasks involved for a single person to be able to organize these offences on his or her own. What commonly happens is that a number of organizers work together. Additional accomplices are also required to perform various tasks — first and foremost, this includes a large number of straw men, who are formal representatives of the companies used for committing the tax offences. Other examples include individuals who either provide access to new companies or contacts with additional accomplices and competent workers who can conduct the black-market labour involved. Another task was referred to by one organizer as the "fire-wall". This task involves protecting key individuals, such as intermediaries and organisers. Those who serve as "fire-walls" may receive additional payments for ensuring that the authorities are unable to penetrate the wall. The less important individuals, primarily the straw men, remain on the outside of the fire-wall. One organizer explains:

"The individuals who make up the fire-wall take care of communications with the rank and file down there. The rank and file can always snitch, but they don't know anything about the rest of it. /.../ [The fire-wall] gets a bonus for keeping his mouth shut. And he's also given more trust, or the same or a better position than before when he gets out of prison." (Organizer)

A criminal network may stretch across a number of different sectors as different individuals help organizers commit different types of tax crime. The majority, however, commit their crimes within the framework of a single sector or possibly two sectors. The reason is that looking for new contacts is risky. Loyalty and trust are important factors within the context of criminal operations (Brå, 2005:11; Korsell, Skinnari, and Vesterhav, 2009; Brå, 2007:7; Brå, 2012:12). The increased risk is partly due to more people learning about the criminal activities and partly due to an increased likelihood that work conducted by black-market labour will be of a poor quality and therefore get detected by dissatisfied clients. Keeping to one's own sector and one's existing network makes it easier to keep these risks to a minimum. Networks that have contacts with insiders or brokers may be more complex since they have access to expertise that can provide them with more room to manoeuvre. There are examples of networks that include brokers who enable them to extend across both the construction and cleaning sectors. However, the vast majority of the individuals within the network either do construction work or are in the cleaning sector, but not both.

Certain functions or roles are more important than others for the criminal activities. Individuals who can provide access to companies or knowledgeable people are particularly important because they lower the costs and risks associated with establishing new contacts. Advisors and insiders at agencies and in the financial sector are also very important. At one end of the spectrum, these may be naive employees who provide too much of a service and fail to ask the questions that they are required to in accordance with the money laundering legislation (Brå, 2011:4; Brå, 2007:4). At the other end of the spectrum are individuals who allow themselves to be bribed or charmed by criminals into allowing transactions that should be stopped (cf. Brå, 2007:4). One organizer spoke about how his "runners" had been successful in developing bank contacts:

"You can't use a guy who's 25 years old with a Mohawk hairdo and scruffy clothing – they have to look like businessmen and behave like businessmen too. Because I know of one case where the runner developed such a good contact with the bank that the bank director wanted him to come to the staff party." (Organizer)

Conclusions for policing

The relatively stable nature of the networks is actually of benefit to the authorities. Having networks that can be mapped out and where the same individuals turn up repeatedly makes intelligence work

easier. The fact that such a large number of people are involved in the criminal activities — it is not unusual for a case in the construction industry to involve at least 50 people, including the black-market workers — makes it impossible for the authorities to investigate everyone. Activities should therefore focus on key individuals, i.e. those who are particularly important to the networks and difficult to replace. Insiders and some intermediaries constitute obvious examples. In addition, such individuals are often well-established in the legal economy, and therefore they have a great deal to lose if detected.

If the authorities want to find the organizers, they will probably need to borrow methods used to combat organized crime. This means considering the use of special powers in the form of telephone taps or bugs, as well as running sources and using informants. Knowing that there may be informants increases the chances that the organizers will feel they are being watched and begin to make mistakes due to the resulting stress (see Brå, 2005:11; Brå, 2007:7; SOU, 2012:44). When people no longer feel that they can trust their accomplices in crime, the loyalty within the networks also comes under pressure.

The number of individuals involved and the interfaces with the legal business community mean that there are lots of people who might detect these crimes. This is not least true of agency representatives working in the field, such as uniformed police officers. However, investigators have a tendency to describe tax crimes in a very technical manner, using arrows and boxes and charts that include every suspect and company involved. This makes it difficult to get an overview of the crimes and makes them unnecessarily difficult to understand. What is important is that police officers in the field know how to recognize a tax crime when they see one. There are examples of police officers who, having found large quantities of stored alcohol, concluded that they were dealing with a case involving illicit sales to underage drinkers and contacted the social services. In fact, what they were looking at was an excise duty fraud operation — and the information was something that the Tax Agency would have wanted access to.

Actors in the private sector can also be made more aware of how to identify tax crimes. Large construction firms and organizations that purchase services such as cleaning and catering should be encouraged to carry out certain checks to avoid supporting the illegal business sector. Furthermore, there are certain risks involved in having business contacts with the illegal sector. If the quality of the work being carried out is poor, and the client withholds payment, there is an obvious risk that the black-market business will engage criminals to collect debts (Brå, 2012:6; Brå, 2012:12).

Myth 2: Traditional offenders are moving into tax crime

The second myth is that traditional offenders, e.g. the members of certain biker gangs, are moving from drug crime and other forms of smuggling into tax crime. This is not really true for two reasons. Firstly, many of those in this group are already involved in tax crime and have been for some time. Secondly, moving into tax crime is a big step to take, since those not already involved often lack the right contacts and competence. At the same time, however, there were cases where the organizers interviewed referred to the belief among certain officials that gangs are behind tax crime. Some used this belief to their own advantage. One organizer explains:

> *"If I've had a runner, for example, and he's asked me, 'What do I say if get caught?' Well, then you say that you've been asked to do this by a person with links to foreign criminal groups or biker gangs. And you're terrified. And you can't say any more. Then you tell them to fuck off and you ask your lawyer to ring me, and we'll resolve the problem. That's what's been the custom, that you always blame biker gangs or foreigners (laughs)." (Organizer)*

Those who already commit tax crimes are often involved in crimes that are similar to traditional smuggling offences. For the most part, these offences take the form of excise duty frauds, in which large volumes of alcohol or tobacco are brought into

Sweden legally and openly, but where regulatory frameworks are then exploited so that duties are not paid and the imported consignments instead disappear onto the black market. There are similar examples involving VAT fraud, where cars may be purchased from Germany, for example, and then sold on in a way that allows the company to reclaim the VAT from the Swedish state. Some offenders also have a background in the construction sector, and some have even learned the trade in prison. This means that they have knowledge of and the contacts required for construction work.

Others have a good knowledge of handling cash as a result of their criminal background and are therefore able to assist with reverse money laundering. In contrast with drug crime, tax offenders have no need for money laundering services to create a false legitimate source for large quantities of cash (Brå, 2007:4; Brå, 2011:4). Tax offenders receive money that is paid into their accounts by more or less legitimate businesses that purchase their services. The difficulty they then face is, instead, that of converting this into cash that can be used for unregistered wages payments. Thus, the money has to disappear into the black economy.

The interviews, however, provided clear indications that certain individuals who have only committed economic crimes and have avoided other types of crime also avoid contacts with offenders of this kind. Perhaps the most important reason for this is that the economic offenders view themselves as businessmen, albeit businessmen operating in a grey area, and do not want to do business with "real criminals". This also means that there is a clear hierarchy in the criminal environment, whereby individuals who are involved in traditional crime have lower status and are viewed as less intelligent than the economic offenders. A number of those interviewed also stated that they avoid individuals who are associated with gangs, since they perceive such individuals as being more likely to become violent and as being impossible to reason with if problems should arise. As one organizer put it:

"If anything were to go wrong, they have no qualms about going the whole way. It's better to deal with people that you can negotiate with." (Organizer)

Another common argument for why individuals with links to criminal gangs should be avoided is that the authorities are assumed to know a good deal about these individuals. This means that such contacts increase the risk of being detected (Korsell, Skinnari, and Vesterhav, 2009). For this reason, they are excluded from a substantial amount of economic crime.

Conclusions for policing

Not least as a result of their intelligence activities, the police have a good knowledge of traditional criminals. It is therefore more effective to focus on these individuals via inter-agency collaborations, in which the police are given the central responsibility. Collaborations via the existing regional intelligence centres are central to these cases (cf. Brå, 2008:10; Brå, 2011:20).

At the same time as it is important to combat the more violent elements within the area of large-scale tax crime, the problem must not be reduced to a question of criminal gangs moving into economic crime. This would involve an obvious risk that the authorities will miss important offenders who lack links to criminal gangs and who often have a greater capacity to commit tax crimes of a kind that are difficult to detect. It is therefore important that the Tax Agency and the Economic Crime Authority remember who their own principal targets are and do not simply allow the target lists of the police to completely govern the goals of the inter-agency collaboration (cf. Brå, 2011:20).

Finally, there are a number of well-known and visible tax crime strategies that traditional criminals are more actively involved in. One example involves excise duty offences related to Finnish red diesel oil that is imported into northern Sweden. This is a type of crime that is visible in the local community and dependent on a market, which, if the authorities wanted, could be greatly disrupted by means of improved inter-agency collaboration and by giving a higher priority to these crimes.

Myth 3: The authorities are far behind

The third and final myth is that the authorities are far behind the criminals, in fact so much so that the battle is already lost. The agency officials who experience this feeling of near hopelessness have an unnecessarily negative view of the situation. Although certain offenders do have the capacity to adapt to the measures taken by society, doing so nonetheless increases costs and risks. Nor can they adapt their criminal activities indefinitely. They are limited by the extent of their contact networks and their own knowledge. There are two very clear examples of how the authorities disrupt the activities of tax offenders.

The first example relates to the offenders' access to companies. As the agencies have improved their control systems, they have become much more efficient at identifying companies that are used for tax crime. A number of the agency officials could remember a time when the same companies were used for approximately a year for sending fraudulent invoices and for filtering payments. In certain types of tax crime, such as excise duty offences, the companies employed may need to be replaced after no more than a month.

Cautious organizers have sought to purchase companies that have been active for a time in the legitimate sector of the field in which the companies will be used. One organizer explains:

"A company that is 10, 20, 30 years old is going to be sold. Their accountant then contacts one of these company consultants and they are promised that the company will be emptied of assets and all that kind of thing and that the board will be replaced and the whole shebang and then the seller then gets a really good deal of course. The consultant maybe gets 20 percent, 80 percent goes to the former owner. The former owner is so bloody negligent and so stupid that the only thing he thinks about is his 80 percent. He never thinks about what will happen to the company." (Organizer)

Some of the interviewees stated that the price of a company of this kind lay at around 100,000 SEK. During the period in which the project was being conducted, Sweden has also had a system in place whereby private individuals can claim tax deductions in connection with, among other things, the purchase of home cleaning and renovation services. The customers receive their tax rebate immediately, as the Tax Agency pays the equivalent of the deductions to the firm used. This has led to certain fraudsters buying a large number of cleaning and construction businesses in order to conduct systematic frauds, in which they use fraudulent documentation to obtain payments from the Tax Agency for work that was never done. This, together with the organizers' greater need to regularly switch companies, has created a situation where suitable companies have become a scarce resource.

There are examples of cases where the organizers have had to make do with newly formed companies or companies that have been working in a completely different sector. In addition, companies that have previously been used to send fraudulent invoices can be sold to individuals who want to use them for the purpose of VAT or credit frauds. This is, among other things, a way of trying to squeeze the final possibilities for profit out of such companies. This makes the authorities' task of identifying companies that are being used for tax crime somewhat easier.

The second example relates to access to cash. The extended money laundering legislation, and in particular the way it is implemented, has made reverse money laundering more difficult, i.e. the process by which money in a bank account is turned into cash for the purpose of black-market payments (cf. Brå, 2011:4). Offenders sometimes encounter problems because bank officials and employees at foreign exchange bureaus refuse to accept their transactions. When black-market workers who are not paid complain, there is a risk that the operations will be detected either by customers in the legal economy or directly by the authorities. One of the individuals interviewed stated that he had been refused jobs as a construction worker because the "employer" had been unable to free up cash to pay him. Others are paid in euro and must themselves convert this

money into Swedish kronor. One black-market worker says:

> *"I've never been cheated [out of wages], but you often have to wait to get paid. The control system and all of the measures mean that they've had problems getting cash, with the money being transferred from one business to another, via a Thai company."* (Black-market worker)

These difficulties have made insiders at banks and foreign exchange bureaus more important. There are also cases where organizers themselves sell a packaged solution for reverse money laundering, taking up to 20 percent of the amount in commission. These organizers have companies of their own, perhaps even their own foreign exchange bureaus, which ensure that they are able to obtain cash. The less professional actors take 5–10 percent of the amount in charges for making the withdrawals and for providing the fraudulent invoices required for the "client's" accounts so that the latter is able to explain the transaction. Altogether, however, the situation is producing considerable and increasing costs for the organizers when they need cash.

Conclusions for policing

One conclusion that can be drawn from these results is that measures to combat money laundering also serve to make tax offences more difficult. When transactions are disrupted, it is not only ongoing operations that suffer but also levels of trust within the criminal networks (cf. Brå, 2007:4; Brå, 2005:11; Korsell, Skinnari, and Vesterhav, 2009). Individuals who are not paid begin to call their contacts into question and either make visible complaints or attempt to find different parties to collaborate with.

Once again, the results indicate the importance of the authorities prioritizing and focusing their activities on key functions — in this case, foreign exchange bureaus that are owned or controlled by criminals. The authorities have already identified a number of these and closed them down. Although new bureaus of this kind continue to open and play a significant role in tax crime during the time that they remain open, it is important to minimize the length of this time.

One of the goals of the tax offenders is to leave a bankrupt company visible for the authorities to find. The intention behind this is to try to ensure that investigative resources will remain focused along existing lines, whereas the money is gone and the organizers are hiding behind their "fire-wall". The challenge for the authorities is that of identifying tax offences while the companies are still being used for the purpose and the money is still in motion. This requires intelligence work and cooperation between different agencies, which in the field of organized crime is today being conducted at regional intelligence centres. Further, there is also a system in place for handling tips and for observations made by private actors and by agencies who conduct a range of control and inspection functions in the field and who can thus develop suspicions about tax offences. As has already been noted, this makes it essential that these actors know both what they are looking for and who is interested in the information they uncover.

A better-oiled, inter-agency collaboration is required at the intelligence stage in order to detect ongoing crime, with the tax crime units, the Economic Crime Authority and the Financial Police in particular having a large number of common interests and sources of information that complement one another (cf. also Brå, 2011:4). In other words, there are good opportunities to improve the policing of large-scale tax crime.

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9   POLICING WHITE-COLLAR CRIME

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Introduction

White-collar crime is financial crime committed by white-collar criminals. Sensational white-collar crime cases regularly appear in the international business press and studies in journals dealing with ethics and crime. With a larger sample, we can study white-collar crime convictions using statistical techniques.

White-collar crime is financial crime committed by upper-class members of society for personal or organizational gain. White-collar criminals are individuals who tend to be wealthy, highly educated and socially connected, and they are typically employed by, and within, legitimate organizations. Ever since Edwin Sutherland first introduced the concept of "white-collar" crime in 1939, researchers have discussed what might be encompassed by this concept and what might be excluded. The discussion has been summarized by scholars such as Benson and Simpson (2009), Blickle et al. (2006), Bookman (2008), Bucy et al. (2008), Hansen (2009), Podgor (2007), Robson (2010) and Schnatterly (2003).

The purpose of this article is to introduce four policing strategies for policing white-collar crime, after first presenting an empirical study on convicted white-collar criminals. The empirical part of this paper focuses on those who committed white-collar crimes in Norway between 2009 and 2012.

Second, the paper introduces four strategies for policing white-collar crime, i.e. a value shop configuration, a knowledge management strategy, an information management strategy and an information technology strategy. A value configuration strategy is concerned with the choice between a value chain, value shop and value network. A knowledge management strategy is concerned with personnel and their knowledge areas. An information management strategy is concerned with issues such as sources of information and the quality of information in police work. Finally, an information technology strategy is concerned with information and communication technology used to store and retrieve electronic information. These strategies may be partly mutually exclusive, but they may also in part compliment and support one another.

This paper thus discusses both white-collar criminals and the strategies that are needed for policing this type of crime.

Portrait of white-collar criminals

Several options exist to identify a substantial sample of white-collar criminals and to collect relevant information about each criminal. However, in a small country like Norway, with a population of only five million people, there are limits to the available sample size.

One available option would be to study court cases involving white-collar crime and criminals. A challenge here would be to identify the relevant laws and sentences that cover our definition not only of white-collar crime, but also the required characteristics of white-collar criminals.

Another available option is to study newspaper articles where the journalists have already employed some kind of selection process for higher class, white-collar individuals convicted in court of financial crime. An advantage of this approach is that the cases are publicly known, which makes it easier to identify cases by their individual white-collar names. The selective and otherwise filtered information in newspapers might be a problem in other kinds of studies, but it is considered acceptable for the purposes of this study. Therefore, the latter option was chosen in this research project.

Based on this decision, our sample consists of the same persons, groups and characteristics as those focused on by the newspapers when presenting the news: famous individuals, famous companies, surprising stories, important events, substantial consequences and matters of principle

and significant public interest. The sample consists of high-profile and large yield offenses. This is in line with research by Schnatterly (2003), who searched through the Wall Street Journal for several years in her study of white-collar crime, which was published in the Strategic Management Journal.

The two main financial newspapers in Norway are "Dagens Næringsliv" and "Finansavisen", both of which are conservative-leaning business newspapers. In addition, the business-friendly national daily newspaper, "Aftenposten", regularly reports news of white-collar criminals. Left-wing newspapers such as "Klassekampen" very seldom cover specific white-collar criminal cases, although they generally report on white-collar crime. It is important to understand the agenda-setting and framing functions of the press and media, perhaps the two most important schemes in journalism, media and communication studies; both functions are clearly relevant as the theme and focus of this article.

It is important to keep in mind that our data deal with newspaper accounts of white-collar crime, not with the distribution of white-collar crime in society, because that is not what is being measured. Using a newspaper sample is different from focusing on the overall number of white-collar crime cases. We argue that a newspaper account is one of the characteristics of white-collar crime, as defined previously. Therefore, news reports are relevant reflections of knowledge about white-collar crime.

As suggested by Barak (2007), news-making criminology refers to the conscious efforts and activities of criminologists to interpret, influence or shape the representation of newsworthy items about crime and justice. News-making criminology as a perspective on the theory, practice and representations of crime and justice is an important approach for understanding white-collar crime. However, Barak's work focused on how the media constructs images of crime. In this study, the media is used as a source of potentially objective information, where factual information in terms of quantitative numbers is collected from newspaper accounts.

White-collar criminals in Norway

Most white-collar criminals are men. This is confirmed in the sample of 255 persons, which included only 20 female criminals and 235 male criminals. Thus, less than 8 per cent of the white-collar crime discussed in newspaper articles was committed by women — sometimes they are labelled pink-collar criminals.

The youngest white-collar criminal in Norway was 21 years old and the oldest was 77 years old. A distinction is made between the person's age when convicted and the person's age when committing crime. On average, a person was convicted five years after the crime had been committed, thus the average age when committing a crime is 43 years old, since the average age when convicted was 48 years old.

Most anecdotal cases, such as those of Rajaratman and Schilling, were men in their 50s or older. This is confirmed in our sample, where the average age is 48 years old when convicted in court. These average numbers are similar to those presented in a study by Blickle et al. (2006) on 76 convicted German white-collar criminals. Their sample consisted of six female criminals and 70 male criminals. The mean age of the offenders in Germany was 47 years. In a study reported by Benson and Simpson (2009), the average age of common criminals was 30 years, while the average age for white-collar criminals was 40 years. It is unclear whether the age of 40 years can be compared to the age of 48 years when convicted or to the age of 43 years when committing the crime in Norway.

The average jail sentence for 255 convicted white-collar criminals in Norwegian courts was 2.2 years, with a maximum of 10 years and a minimum of 15 days. The longest jail sentence of 10 years was given to a person involved in bank fraud, where millions were transferred from a rich widow's account in Norway to a friend's account in Dubai. Since the convicted criminal was operating in a group of criminals, he was convicted of organized crime, which in Norwegian law results in the jail sentence for a criminal act being extended from a more normal level, say six years, to ten years in his case.

A distinction can be made between the leader and follower in crime. Followers tend to be naive and unaware of what is really happening, or they are simply taken in by the personal charisma of the leader and are intensely loyal to that person (Bucy et al., 2008). In our sample of 255 criminals, we found 140 leaders and 115 followers.

Another distinction is often made between corporate crime and occupational crime. While corporate crime is mainly for the benefit of the organization, occupational crime is mainly for the benefit of the individual (Hansen, 2009). In our 255 cases, we found 88 corporate criminals and 167 occupational criminals. These are compared in the following table.

Table 1. Comparison of characteristics of occupational crime versus corporate crime

Total: 255 criminals	88 corporate criminals	167 occupational criminals	T-statistic difference	Significance of t-statistics
Age convicted	49 years	47 years	1.615	.108
Age at time of crime	44 years	42 years	1.337	.183
Years in prison	2.1 years	2.2 years	-.270	.787
Amount of crime	117 millions	26 millions	3.891	.000
Involved individuals	3.1 persons	4.7 persons	-3.366	.001
Personal income	388 000 kroner	295 000 kroner	1.267	.206
Personal tax	165 000 kroner	120 000 kroner	1.543	.124
Personal wealth	1 258 000 kroner	1 499 000 kroner	-.291	.771
Business revenue	217 millions	191 millions	.518	.605
Business employees	145 persons	113 persons	.829	.408

The number of persons involved in financial crime is significantly different among the two groups. While 4.7 persons on average were involved in occupational crime, the average for corporate crime was 3.1 persons. This result may seem counterintuitive, as crime on behalf of the corporation would seem to require more involvement by others than is necessary for occupational crime. However, we have to remind ourselves that only convicted criminals are included in this sample.

The next item in the table is the personal income of offender. Although there is no statistically significant difference in monetary terms, the corporate criminal made more money than the occupational criminal. While making more money, the corporate criminal also pays a little more money in tax to the government. However, corporate criminals are less wealthy than occupational criminals.

Value shop configuration

The empirical observations presented so far serve as background to illustrate the need for a number of policing strategies. First, policing white-collar crime requires an iterative rather than sequential investigation approach in terms of the value shop configuration. Second, knowledge about financial crime areas and motives is needed in order to police successfully. Third, the information strategy is concerned with sources of information on financial crime. Finally, the information technology strategy is needed to handle electronic information acquired when using the information strategy and to support knowledge work based on the knowledge management strategy.

We start with the value shop configuration. The investigation and prevention of white-collar crime has the configuration of a value shop. As can be seen in Figure 2, the five activities of a value shop are inter-

locking and, although they follow a logical sequence (much like the management of any project), the difference from a knowledge management perspective arises in terms of the manner in which knowledge is used as a resource to create value in terms of results for the organization. Hence, the logic of the five interlocking value shop activities in this example pertains to a policing unit and the manner in which it carries out its core business of conducting reactive and proactive investigations.

The sequence of activities commences with understanding the problem, moves into alternative investigation approaches, investigation decisions and investigation implementations and ends up with a criminal investigation evaluation. However, these five sequential activities tend to overlap and link back to earlier activities, especially in relation to activity 5 (control and evaluation) in policing units, when the need for control and command structures are a daily necessity due to the legal obligations that policing unit authority entails. Hence, the diagram is meant to illustrate the reiterative and cyclical nature of these five primary activities when it comes to managing the knowledge collected during, and applied to, a specific investigation in a value shop manner.
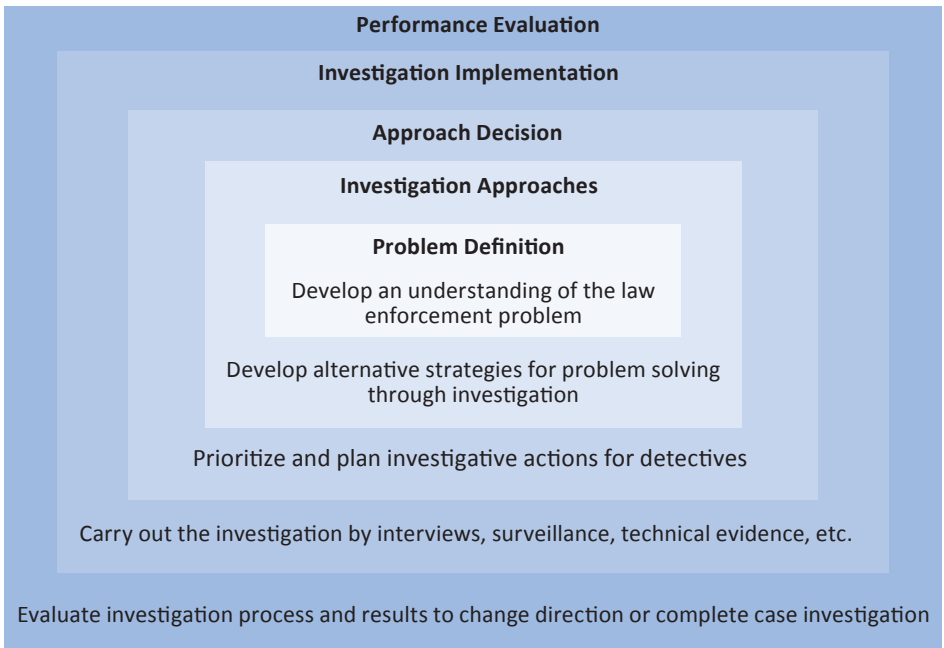

Performance Evaluation

Investigation Implementation

Approach Decision

Investigation Approaches

Problem Definition

Develop an understanding of the law enforcement problem

Develop alternative strategies for problem solving through investigation

Prioritize and plan investigative actions for detectives

Carry out the investigation by interviews, surveillance, technical evidence, etc.

Evaluate investigation process and results to change direction or complete case investigation

Figure 1. The knowledge organisation of investigation and prevention unit as value shop activities.

The five primary activities of the value shop depicted above in relation to a financial crime investigation and prevention unit can be outlined as follows:

1. *Problem Definition.* This involves working with parties to determine the exact nature of the crime, and hence, how it is to be defined. For example, depending on how responding officers perceive of and/or choose to define it, a physical assault in a domestic violence situation can be either upgraded to the status of grievous bodily harm to the spousal victim or it may be downgraded to a less serious, common, garden-variety assault and defined as a case where a bit of rough handling took place towards the spouse. This understanding of the concept of crime, an understanding that has to do with whether or not detectives choose to make incidents into a crime, is highly relevant here and accounts for why this first activity has been changed from a problem-finding term originally used in the business management realm into a problem definition process here in relation to policing work. Moreover, this first investigative activity involves deciding on the overall investigative approach for the case not only in terms of information acquisition but also (as indicated in Figure 1) in terms of undertaking the key task, usually headed by a senior investigative officer in a serious or major incident, of forming an appropriate investigative team to handle the case.

2. *Investigation Approaches.* This second activity of identifying problem-solving approaches involves the actual generation of ideas and action plans for the investigation. As such, it is a key process because it establishes the direction and tone of the investigation and is very much influenced by the composition of the members of the investigative team. For example, the experience level of the investigators and their preferred investigative thinking style might be a critical success factor in this second primary activity of the value shop.

3. *Approach Decision.* This solution choice activity represents the decision of choosing between alternatives generated during the second activity. Despite being the least important primary activity of the value shop in terms of time and effort, it might be the most important in terms of value. In this case, it involves trying to ensure as much as is possible that what is decided upon is the best option to follow in order to achieve an effective investigative result. A successful solution choice is dependent upon two requirements. First, the alternative investigation steps need to be identified in the problem-solving approaches activity. It is important to think in terms of alternatives, otherwise no choices can be made. Second, the criteria for decision-making must be known and applied to the specific investigation.

4. *Investigation Implementation.* As the name implies, executing a solution entails communicating, organizing, investigating and implementing decisions. This is an equally important process or phase in an investigation because it involves sorting through the mass of information coming into the incident room concerning a case and directing the lines of enquiry as well as establishing the criteria used to eliminate a possible suspect from further scrutiny in the investigation. A miscalculation here can stall or even ruin the whole investigation. Most of the resources expended on an investigation are used here in this fourth activity of the value shop.

5. *Performance Evaluation.* Control and evaluation involves monitoring activities and measuring how well the solution solved the original problem or met the original need. This is where the command and control chain of authority comes into play for investigation and prevention units and where a determination about the quality and quantity of the evidence is made in terms of whether or not to charge and prosecute an identified offender in a court of law.

Knowledge management strategy

A knowledge management strategy focuses on personnel resources, where the knowledge of each police officer as well as the combined knowledge in the police department represents resources that are to be explored and exploited for better police work. The knowledge management strategy process includes developing a working definition of knowledge, developing a working definition of knowledge management, performing a knowledge audit, defining knowledge management objectives and strategy approaches, and implementing a strategy with quality measures (Chaffey and White, 2011).

While data are numbers and letters without meaning, information is data in a context that makes sense. When combined with interpretation and reflection information, it becomes knowledge; knowledge accumulated over time, such as learning, constitutes wisdom. In this hierarchical structure, we find that intelligence amounts to more than information and less than knowledge. Intelligence is analyzed information, as illustrated in the following figure.

The word intelligence can refer to a product, a process, the individual organization that shapes raw data into a finished intelligence product, and also the larger community in which these organizations operate. The word intelligence also often refers to the military or to agencies like MI5 (the Security Service) or MI6 (Secret Intelligence Service) in the UK. However, in this paper intelligence relates to criminal actions and is defined as a goal-oriented means of gathering, systematizing and analyzing information (Wilhelmsen, 2009).

Data is considered the raw material that constitutes information. As is the case with notes, information is data endowed with relevance and purpose. The same can be said of intelligence in that it is a form of insight to which some relevance has been attached through an attempt to offer an organized analysis of the information received by a crime analyst/ intelligence officer. Accordingly, intelligence is placed on the above continuum between information and knowledge, since, ideally (as argued), intelligence represents a form of validated information.

Investigation is a core part of police work and law enforcement — it is a truism in policing that information is the lifeblood of an investigation. An investigation goes nowhere if information is not forthcoming concerning an incident. Information is the raw data that breathes life into an investigation. It comprises ordinary rank and file employees working in human resource departments and accounting departments or sitting at a computer conducting searches and background checks or doing more sophisticated crime mapping and intelligence analysis reports and collecting and collating information.
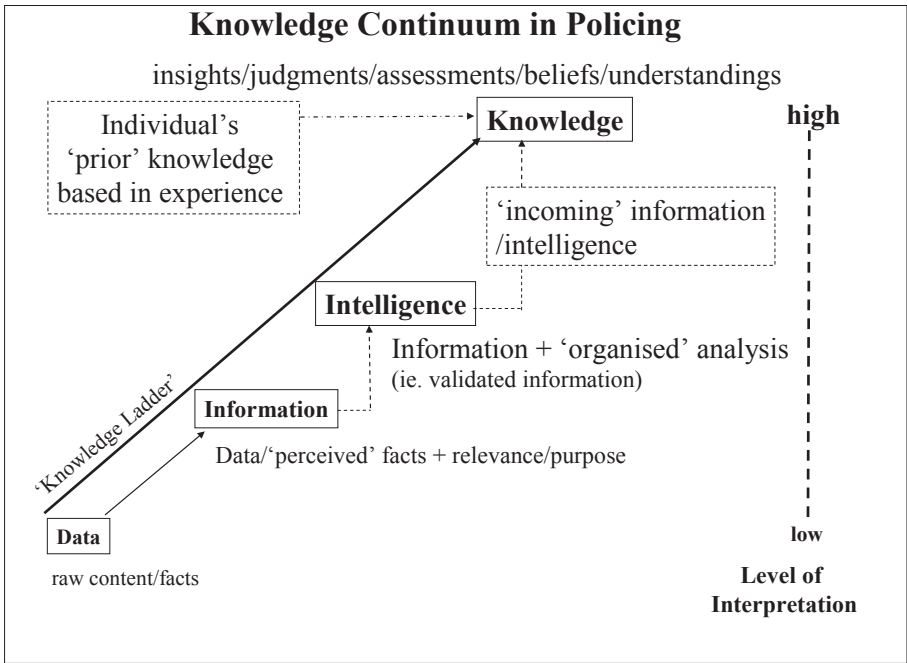
Figure 2. Hierarchy of investigation and prevention insight expressed as a continuum.

Information and, to a similar extent, intelligence thereby consist of facts and other data, which is organized to characterize or profile a particular situation, incident or crime and the individual or group of individuals presumed to be involved. This organizing of data into meaningful information necessarily involves some level of interpretation of the facts as presented. However, the role of interpreting the information in this instance is relatively minor in comparison to its role in terms of knowledge construction. In this regard, the role of interpretation in intelligence is greater and more explicit than it is in terms of information, but not as extensive as it is in the making of knowledge.

Here, we distinguish between the following knowledge categories for investigating and preventing financial crime:

1. *Administrative knowledge* is knowledge about the role of management and executive leadership. It is knowledge about procedures, rules and regulations.

2. *Organization knowledge* is knowledge about how the business is organized and managed from the perspective of law enforcement. This is knowledge at the organizational level.

3. *Employee knowledge* is knowledge about where employees spend their working hours, what they do and why they do it. This is knowledge at the individual level.

4. *Process knowledge* is knowledge about work processes and practices in business work when committing financial crime. Process knowledge is based on police science, which includes all aspects of policing, both internal and external (Jaschke et al., 2007). It also includes external factors that influence the role and behaviour of policing in society.

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5. *Investigative knowledge* is knowledge based on case-specific and case-oriented collection of information to confirm or disconfirm whether an act or non-act is criminal. Included here are case documents and evidence in such a form that they prove useful in a court case.

6. *Intelligence knowledge* is knowledge based on a systematic collection of information concerned with a certain topic, a certain domain, certain persons or any other area of focus. The collected information is transformed and processed according to a transparent methodology to discover any criminal capacities, dispositions and goals. Transforming and processing the information generates new insights into criminality that guide the effectiveness and efficiency of prevention and investigation. Included in intelligence knowledge is phenomenological knowledge, which is defined as knowledge about a phenomenon in terms of what it is about (know-what), how it works (know-how) and why it works (know-why). Phenomenological knowledge enables intelligence workers to "see" what "something" is about by understanding and not overlooking information that emerges.

7. *Legal knowledge* is knowledge of the law, regulations and legal procedures. It is based on having access to a variety of legal sources both nationally and internationally, including court decisions. Legal knowledge is composed of declarative, procedural and analytical knowledge. Declarative knowledge consists of the law and other regulations. Procedural knowledge is the practice of law. Analytical knowledge is the link between case information and laws.

8. *Technological knowledge* is knowledge about the development, use, exploitation and exploration of information and communication technology. It is knowledge about applications, systems, networks and databases.

9. *Analytical knowledge* is knowledge about the strategies, tactics and actions that executive managers and investigators can implement to reach desired goals.

Knowledge levels are defined here as basic knowledge, advanced knowledge and innovative knowledge. An alternative approach is to define knowledge levels in terms of knowledge depth: know-what, know-how and know-why. These knowledge depth levels represent the extent of insight and understanding regarding a phenomenon. While know-what involves a simple perception concerning what is going on, know-why entails more complicated insights about cause-and-effect relationships in terms of why it is going on:

1. *Know-what* is knowledge about what is happening and what is going on, whereby an executive perceives that something is going on that might need his or her attention. The executive's insight is limited to the perception that something is happening. The executive neither understands how nor why it is happening.

2. *Know-how* is knowledge about how financial crime develops, how a criminal behaves or how criminal activity is organized. The insight of the executive or investigator is not limited to just a perception that something is happening; he or she also understands how it is happening or the nature of the situation.

3. *Know-why* is knowledge representing the deepest form of understanding and insight into a phenomenon. The executive or investigator not only knows what is occurring and how it is occurring, he or she also has developed an understanding of why it is occurring or why it is as it is. Developing hypotheses about cause-and-effect relationships and empirically validating causality are important characteristics of know-why knowledge.

Information management strategy

An information management strategy is one of several strategies that law enforcement organizations develop and implement to improve white-collar crime detection and prevention. Police intelligence is an important element of the strategy. An information management strategy defines management approaches to the organization, control and application of police information resources through the coordination of people and technology resources in order to support policing strategies and processes. While the knowledge management strategy focuses on personnel resources, and the information systems strategy focuses on technology resources, the information management strategy focuses on identifying, retrieving, storing and applying information resources. Important issues in this strategy are information relevance and timeliness (Chaffey & White, 2011).

For an information management strategy, it is important to be aware of the variety of information sources available. In this paper, we have chosen to classify information sources into the following categories:

1. *Interview*. By means of the *interrogation* of witnesses, suspects, reference persons and experts, information is collected on crimes, criminals, times and places, organizations, criminal projects, activities, roles, etc.

2. *Network*. By means of *informants* in the criminal underworld as well as in legal businesses, information is collected on actors, plans, competitors, markets, customers, etc. Informants often have connections with persons that an investigating colleague would be unable to formally approach.

3. *Location*. By analyzing potential and actual *crime scenes* and potential criminal scenes, information is collected on criminal procedures, preferences, crime evolution, etc. Hot spots and traces are found. Secret ransacking of suspicious places is one aspect of this information source. Pictures, in terms of crime scene photographs, are important information elements.

4. *Documents*. Studying documents obtained via *confiscation* may provide information on ownership, transactions, accounts, etc. One such example is forensic accounting, which is the application of accounting tasks for an evidentiary purpose. Forensic accounting is the act of identifying, recording, settling, extracting, sorting, reporting and verifying past financial data or other accounting activities for settling current or prospective legal disputes, or else using such past financial data to project future financial data in order to settle legal disputes (Curtis, 2008).

5. *Observation*. By means of *anonymous personal presence*, both individuals and activities can be observed. Both in the physical and the virtual world, observation is an important part of financial crime intelligence. One example is digital forensics, where successful cybercrime intelligence requires computer skills and modern systems of policing. Digital forensics is the art and science of applying computer science to aid the legal process. It amounts to more than a technological, systematic inspection of electronic systems and their contents for evidence or supporting evidence of a criminal act; digital forensics requires specialized expertise and tools when applied to intelligence in important areas, such as the online victimization of children.

6. *Action*. For example, this might include *provocation* and actions conducted by the investigating unit to provoke reactions that yield intelligence information. In the case of the online victimization of children, online grooming offenders in a paedophile ring are identified and their reaction after being provoked leads intelligence officers to new nodes (persons, computers) and new actual and potential victims. While the individual paedophile is mainly concerned with combining an indecent image impression and personal fantasy to achieve personal satisfaction, online organizers of the sexual abuse of children do so for profit.

7. *Surveillance*. Surveillance (visual and auditory) of places by means of *video cameras* and microphones are a part of this information source. Many busi-

ness organizations have surveillance cameras on their premises to control entrants and also other critical areas. It is possible for the police to listen in on discussions in a room without the participants knowing. For example, police in a district identified the room used by local Hells Angels members for crime planning and installed listening devices in the room. Harfield (2008, p. 64) argues that when surveillance is employed to produce evidence, the product is often considered incontrovertible (hence, defence lawyers' focus on process rather than product when cross-examining surveillance officers): "An essentially covert activity, by definition surveillance lacks transparency and is therefore vulnerable to abuse by over-zealous investigators."

8. *Communication control*. Wiretapping in terms of *interception* belongs to this information source. Police listen in on what is discussed on a telephone or transmitted via a data line without the participants being aware of it. In the UK, intercepting communications (telephone calls, emails, letters, etc.) while generating intelligence to identify more conventional evidential opportunities for committing crimes is excluded from trial evidence by law — to the evident incredulity of foreign law enforcement colleagues (Harfield, 2008).

9. *Physical material*. This involves investigating material in order to identify, for example, *fingerprints* on doors or bags, or to investigate blood splatters and identify the blood type. Another example is legal visitation: this is an approach used to identify illegal material. DNA is emerging as an important information source, and it is derived from physical material such as a person's hair or saliva. One approach to physical material collection is police search.

10. *Internet*. As an *open source*, the Internet is just as important for general information and specific happenings involving corporate crime intelligence as it is for everyone else. It is important to note that the use of open sources is by no means a new activity. Nor is it a new phenomenon found only on the Internet. The Internet is in

and of itself not a source; rather, it is a tool used for finding sources. Also, there are risks involved in using open sources, such as self-corroboration.

11. *Policing systems*. *Police records* are readily available in most police agencies. For example, DNA records may prove helpful when DNA material from new suspects is collected. Similarly, corporate social responsibility units may collate and develop records that do not violate privacy rights.

12. *Employees*. Information from the *local community* is often supplied in the form of tips to local police, using law enforcement tip lines. Similarly, a corporate social responsibility unit can receive tips from employees in various departments.

13. *Accusations*. In the case of victimized persons and goods, a *claim* is filed with the corporate investigation unit or the unit for corporate social responsibility.

14. *Exchange*. International *policing cooperation* includes the exchange of intelligence information. International partners for national police include national police in other countries as well as multinational organizations, such as Europol and Interpol. Similarly, trade organizations and other entities for business organizations create exchanges for financial crime intelligence.

15. *Media*. Intelligence officers are exposed to the *news* by reading newspapers and watching TV.

16. *Control authorities*. Cartel agencies, stock exchanges, tax authorities and other control authorities are *suppliers of information* to the corporate executives in the event of suspicious transactions.

17. *External data storage*. A number of business and government organizations store information that may prove useful in financial crime intelligence. For example, telecom firms store data about traffic, where both the sender and the recipient are registered with the date and time of communication.

All of these information sources have different characteristics. For example, information sources can be distinguished in terms of the extent of their trustworthiness and accessibility.

Information technology strategy

Knowledge management systems are information systems coupled with knowledge-sharing practices that support knowledge management efforts within an organization (Durcikova et al., 2011).
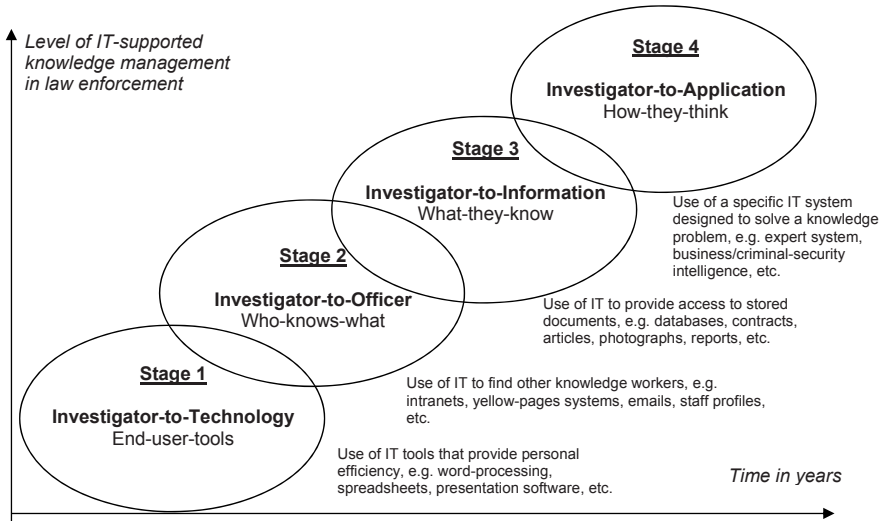

Figure 3. The knowledge management system's stage model for policing.

The stages of knowledge management technology are such that ICT is more useful to knowledge work in its later stages than it is at earlier stages. The relative concept implies that ICT is more directly involved in knowledge work at higher stages and that ICT is able to support more advanced knowledge work at higher stages:

1. *Investigator-to-Technology Stage: Tools for end users* are made available to knowledge workers. At the simplest stage, this means having a capable networked PC on every desk or laptop in every briefcase, with standardized personal productivity tools (word processing, presentation software), so that documents can be exchanged easily throughout a company. More complex and functional desktop infrastructures can also be the basis

for the same types of knowledge support. Stage 1 is characterized by widespread dissemination and use of end-user tools among knowledge workers in the company. For example, at this stage, lawyers in a law firm will use word processing, spreadsheets, legal databases, presentation software and scheduling programs.

2. *Investigator-to-Investigator Stage: Information about who knows what* is made available to all people in the firm and to select outside partners. Search engines should normally facilitate work with a thesaurus, since the terminology in which expertise is sought may not always match the terms (and hence, the search words) that the expert uses to classify such expertise.

3. *Investigator-to-Information Stage: Information from knowledge workers* is stored and made available to everyone in the firm and to designated external partners. Data mining techniques can be applied here to find relevant information and combine information in data warehouses.

4. *Investigator-to-Application Stage: Information systems solving knowledge problems* are made available to knowledge workers and solution seekers. Artificial intelligence is applied in these systems. For example, neural networks are statistically oriented tools that excel at the application of data to classify cases into categories. Another example is expert systems, which can enable the knowledge of one or a few experts to be used by a much broader group of workers. Investigator-to-application systems will

only be successful if they are built on a thorough understanding of law enforcement.

Conclusion

Rather than provide anecdotal evidence about famous white-collar cases, this article has applied a systematic approach to study a large sample of convicted criminals. The sample has made it possible to analyze both corporate and occupational criminals.

Policing white-collar crime requires appropriate strategies that can be put into action. This article presented four important strategies: an information management strategy, a knowledge management strategy, an information systems strategy and a value configuration strategy. The strategies are illustrated in Figure 4.
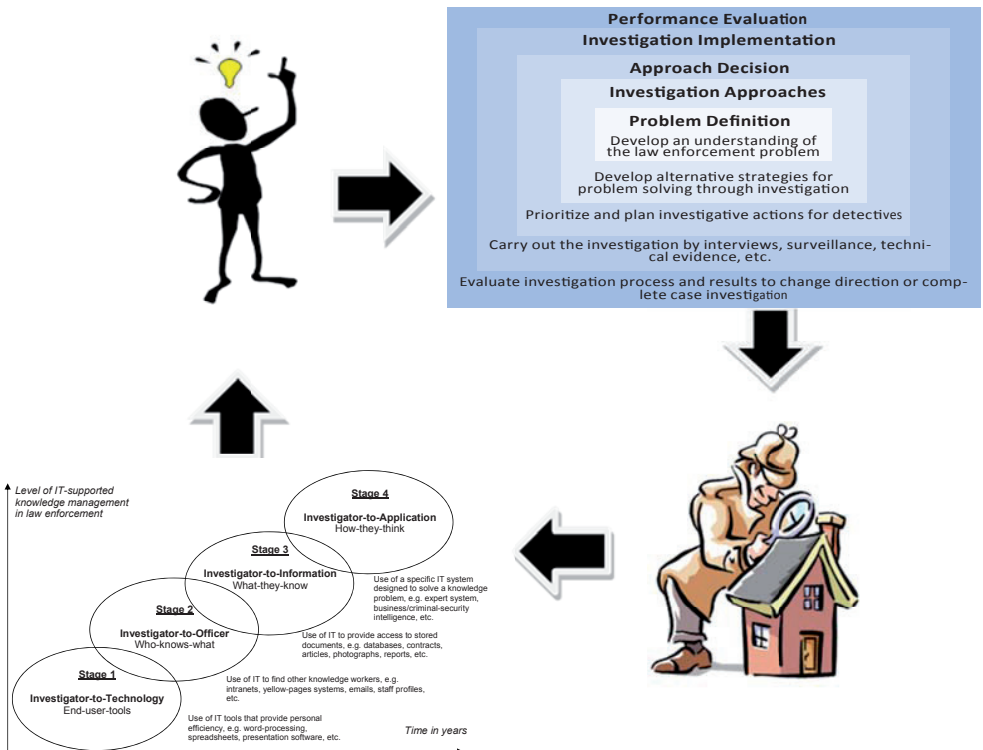

Figure 4. Four strategies for policing white-collar crime.

In general, police strategy is concerned with the choices that are made in order to reach policing goals (Ortmeier and Davis, 2012, p. 29):

"A policing strategy is an approach to delivering police services based on specific assumptions about matters such as how police and community residents should interact, what causes crime to worsen, and how technology might be leveraged. Each strategy has unique advantages and disadvantages. Some strategies are mutually exclusive, while others complement or support one another."

An information management strategy is concerned with issues such as the sources of information and quality of information in police work. A knowledge management strategy is concerned with personnel and their knowledge areas. An information systems strategy is concerned with using information and communication technology to store and retrieve electronic information. A value configuration strategy is concerned with the choice between a value chain, value shop and value network. These strategies may in part be mutually exclusive, and they may also partially compliment and support one another.

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10 MAIN TRENDS OF ECONOMIC CRIMES IN FINLAND DU-RING 2000−2011

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Introduction

This article describes the development trends of economic crimes in Finland. It includes information, for example, on the number of cases, the different types of offences and also the value of financial damage and repossessed property.

The research is related to the discussion on economic crimes and the activities taken by the police to prevent illegal activities.[12] The data was obtained from the National Police Information System (Polstat 2000–2011).

Definition of economic crimes

The concept of economic crime is closely related to other concepts describing criminality in companies and other organisations. In this discussion, for example definitions such as white-collar crime, financial crime, corporate crime and grey economy are often used (COE, 1981; Sutherland, 1983; Levi, 1992). In this article, we refer to various types of economic criminality utilizing the concept of economic crime.

The police define cases as economic crimes according to the classification guidelines issued by the Finnish Ministry of the Interior.[13] These guidelines state that an economic crime usually involves an illegal act or negligence committed to gain significant economic advantage for the operations of a company or organisation.

The guidelines also define the types of offences in the penal code considered to be economic crimes.

Economic crime cases are classified according to the guidelines at the beginning of an investigation. If the case is classified as an economic crime case, then it is included in the statistics.

Information on economic crime cases

Number of economic crime cases

In 2011, approximately 1,520 economic crime cases were reported to the police and 1,670 cases were closed. At the end of the year there were still 2,010 open cases. During the past five years, the number of open cases has varied more than the number of reported or closed cases. Surprisingly, the economic recession in 2009 did not lead to a long-lasting overload in the processing of these matters.
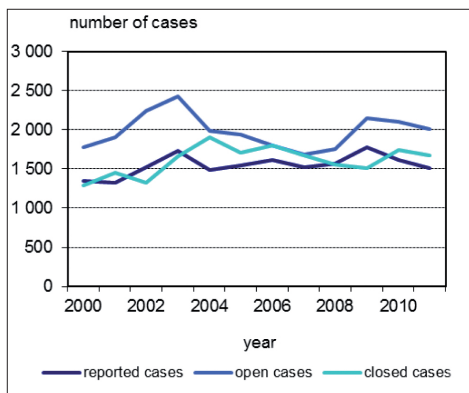

Figure 1. The economic crime cases in the Finnish police records, 2000–2011.

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12 This article is based on a report by Muttilainen & Kankaanranta (2011b), which describes development trends of economic crimes in Finland during the years 2000–2009. Information on economic crime trends included in the report is updated here. See also Muttilainen & Kankaanranta (2011a).
13 SM-2006-02150/Ri-0.

In 2011, police spend an average of 310 days to handle the economic crime cases, with it taking an average of 770 days to pass from the criminal act to the closing of the case. The average processing time for the economic crime cases did not lengthen in 2011, although the number of open cases remained fairly high.
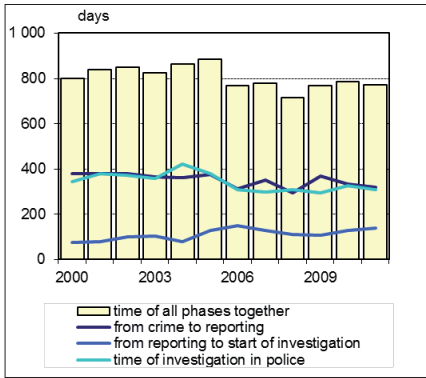

Figure 2. Time spend for processing the economic crime cases according to the Finnish police records from the criminal act to the end of the investigation, 2000–2011.

The number of long-term cases − cases which had been open for longer than two years − was more than 400 in 2011. Approximately 22 per cent of open economic crime cases had been open for more than two years. Both the number of those cases and their share of all open cases increased compared to the previous year.

Economic interests in economic crime cases

Damages resulting from the closed economic crime cases in 2011 totalled EUR 144 million, which is equal to nearly one per mille of the GNP (Gross National Product). The calculated financial damage per case was EUR 86,000. The damages have developed at a rather steady pace in the long-run, with some exceptions. However, it must be borne in mind that the criminal damage resulting from the economic crimes reported to the police only represents a minor part of the total damage caused to society by economic crimes.

The effectiveness of economic crime investigation can be estimated, for example, on the basis of repossessed property. The value of property repossessed in 2011 totalled EUR 32 million. This can be estimated to cover the costs of the more than 400 person-years expended by the police in preventing and investigating economic crimes. These persons are working in the Finnish National Bureau of Investigation and at local police stations in the field of economic crime investigation.
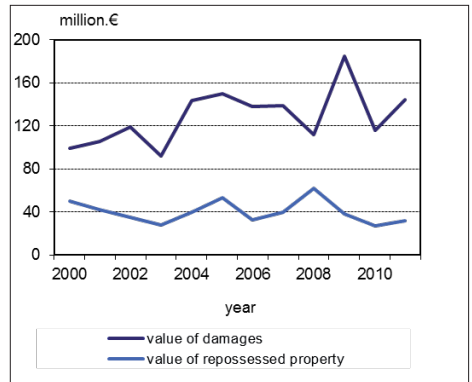

Figure 3. Economic interests in closed economic crime cases in the Finnish police records, 2000–2011

Information on different types of crimes in economic crime cases

The economic crime cases investigated by the police in 2011 included all in all approximately 3,200 crimes out of which 2,000 were economic crimes. That translates to 2.1 crimes and 1.3 economic crimes per case. The number of crimes in economic crime cases has remained rather stable in the 21st century. However, some individual cases can be extensive and complex.

The most common economic crimes in 2011 were accounting violations (approx. 660 cases), offences by a debtor (approx. 420) and tax violations (approx. 420). These types of offences accounted for about half of all crimes in economic crime cases and for 75 per cent of the economic crimes involved in these cases. Fraud is also a fairly common type of economic crime.

In addition, there are a large number of less common types of economic crimes. These types of crime include, for example, crimes against the public economy, employment-related offences, environmental crimes, data and communication crimes, and copyright violations.
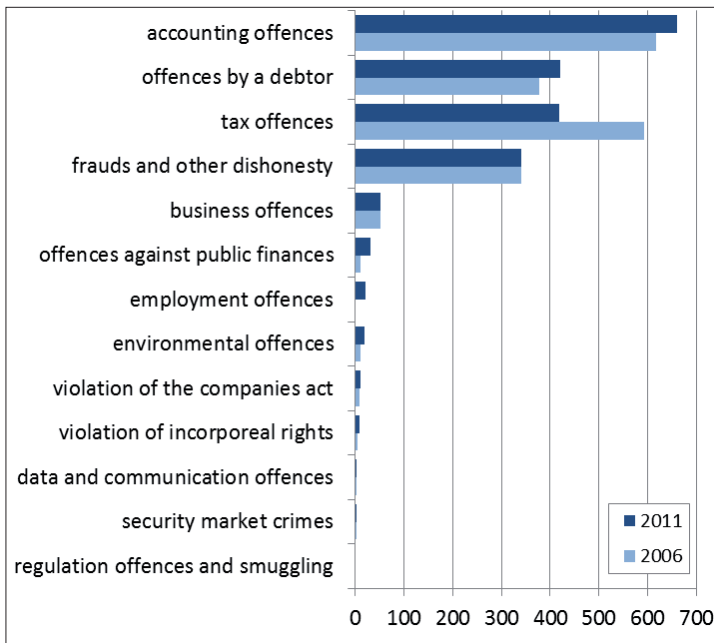

Figure 4. Number of economic crimes in economic crime cases in the Finnish police records in 2006 and 2011

Discussion and conclusions

The area of economic crimes featured in this report involves a wide range of offences. This is a challenging situation for the prevention and investigation of economic crimes. Authorities dealing with suspected economic crimes do not have enough time to address all violations, as they have to concentrate on the serious cases.

According to statistical information, the number of economic crime cases and economic interests in these cases has remained fairly stable since the year 2000. This stable development is mainly due to other authorities' ability to prepare cases for the police. On the other hand, the general economic development reflects, for example, economic criminality and activities by the police in this field.

Many questions still remain related to the proper evaluation of economic criminality. What types of crime should our definition cover? Is it necessary to pay attention to crimes committed outside companies and other organizations? How should we evaluate cases in which the monetary value of an individual case is small, but the overall number of cases is remarkable?

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11 STRATEGY DEVELOPMENT, PLANNING AND PERFORMANCE — A CASE STUDY OF THE FINNISH POLICE

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Introduction

The topic of this research project, strategy development, planning and performance management, is currently very important because when operating in an increasingly uncertain and rapidly changing operative environment, managers need to translate their insights into strategies in order to cope with the changing circumstances. (See e.g. Bryson, 2004, p. 1) The reasons for the growing interest in strategy development and performance in public sector organization are many-sided. The need for greater operational effectiveness has forced organizations to focus on their strategy, planning and performance management; this has led to a more efficient use of organizational resources and has highlighted the importance of strategies. Strategy has been linked with performance management in an effort to respond to future challenges by predicting and estimating what is needed within a fiscal year and lay the foundation for future successes while meeting today's challenges (see e.g. Fahey & Randall, 1994) by tracking the use of resources.

Steering is done via indicators to maximize cost-efficiency and improve performance in organizations. The case study, the Finnish Police, is an example of a public sector organization that has implemented performance management systems and tried to link strategy with planning and performance management for over a decade. Are the indicators measuring the strategically important areas? Or, are they just being used because it is mandatory to report certain key figures to the government (accountability)? Are the indicators only meaningful when there has been a major reorganization or when a new programme has been introduced? These are some of the main questions that came up when considering strategy, planning and performance management in the case of the organization under study.

The topics of strategy, planning, and performance management have been studied from several viewpoints for a long period of time (See, e.g., Ansoff, 1965; Chandler, 1962; Lindblom,1959; Mintzberg & Quinn, 1996; Porter, 1990, 1991; Quinn & Voyer, 1998; Quinn, 1980). Moreover, there is an increasing interest in strategy development and planning in the public sector (e.g. Bryson, 1988, 2004a; Bryson and Alston, 2005; Bryson et al., 2010, 2011; Nutt & Backoff, 1992, 1995; Olsen & Eadie, 1982; Poister, 2010; Poister & Streib, 2005). The New Public Management reform introduced business-like, customer-centric methods and managerial tools to improve cost-efficiency, the economy and effectiveness (see, e.g., Pollitt & Bouckaert, 2000, 2004; Pollitt, 2006). However, adopting business -type and customer-oriented managerialism used in the private sector might not offer a perfect fit for a public sector organization (see, e.g., Davis, 1999).

In addition, the public sector's results are not so easy to measure and it is difficult to find suitable indicators. This is because organizations today are embedded in a dense network of inter-organizational relationships with collaborating partners, interest groups and other government agencies. Also, globalization and the fast pace of technology have made it difficult for any organization to measure and to keep up with changes. Moreover, changes in the public sector depend also on political guidance, and therefore, a different political leader can have different viewpoints about what should be measured. The degree of freedom to decide is limited by the accountability to the ministry in charge in Finland. Nevertheless, little empirical research has been published on strategy, planning and performance management in a police organization, in particular with reference to the Finnish context.

This paper will discuss the theoretical background to and previous studies on strategy, planning and performance management. Second, it will present the methodology and the research strategy for

studying this issue. Third, it will discuss the Finnish police as a case study. The paper concludes by discussing managerial implications and future research possibilities.

Strategy-related research

The recognition that private and public sector organizations have diverse strategies, challenges and strategy development processes, each of which require its own management capabilities and managerial focus, is key to understanding the importance of strategy. The strategy, performance management and underlying institutional framework of a given organization reflect changes in the operative environment shaping and renewing the strategy and affecting the organization's performance.

A strategy can be a driving force, it can be intentional or planned, or it can emerge (Mintzberg, 1978) due to the changing operational environment, or due to political or societal changes. If a strategy fails, it can have a paralyzing effect on any public sector organization because of the fact that it can also have a wide and many-sided effect on society. In addition, failing to perform as planned can cause the organization to lose the public's trust. A number of scholars and professionals have concluded that organizations should make more efforts at discovering the possible threats and problems in their initial stages and changes in the operative environment before they affect the organizations. Otherwise, if potential problems escalate or if the threats are realized, they can evolve into crises, which may be critical to the organizations' success (see, e.g., Grunig & Repper, 1992; Stoffels, 1994) and performance.

Strategy needs to be re-evaluated over time because of the fact that organizational, environmental or other factors have changed. Organizations need to adapt to their environment. For example, shifts in values affect society and, in turn, also public administration (cf. Kanter, Stein, & Jick, 1992; Van Wart, 1998, p.164); this requires changes in how tasks are prioritized, in how processes are tuned and in how resources are reallocated. The fast pace of technological development, the global economy, international crime, glo-

balization in general, new innovations and increased social demands, for instance growing unemployment and increasing gaps between different social classes, demand a degree of effectiveness and transparency; likewise, demands for e-services have also challenged public sector organizations. However, public sector organizations are slower to respond than private sector organizations due to their fiscal and legal constraints and bureaucratic processes. Moreover, public sector organizations have started to use management tools similar to what the private sector uses to follow up on strategy implementation and the use of resources.

Several previous studies have discussed the content of strategy in both the public and private sector (see, e.g., Mintzberg, 1978; Mintzberg & Waters, 1985; Porter, 1980, 1990; Camerer,1985; Boyne & Walker, 2004) and Mintzberg's ten schools of strategy formation (Mintzberg, Ahlstrand, & Lampel, 2002). Boyne and Walker (2004, p. 246) discussed strategy content in public sector organizations, concluding that, "the government possess and effective as well as formal chain of command." They also argued that public sector organizations tend to be "reactors because they are subject to more regulation" (Boyne & Walker, p. 244), and that, "strategy is continuous and dynamic rather than categorical and static" (p. 247).

Research on strategy theory and strategy content was first done as a part of functional business studies (see, e.g., Ansoff, 1965; Chandler, 1962). It aimed at integrating the functional areas of strategy. The strategy field was very broadly defined therefore. Second, strategy research aimed at gaining a deep understanding of the various functional business areas (Porter, 1980). Third, studies on strategy moved forward due to extensive empirical research (see, e.g., several case studies to understand the concept of strategy: Kotha & Vadlamani, 1995; Mintzberg & Quinn, 1996; Mintzberg & Waters, 1982), and researchers noted that strategy can have different meanings, that it is not necessarily static and that it can change over time (see Mintzberg et al., 2002).

Some researchers (e.g. Peteraf, 1993; Teece, Pisano, & Shuen, 1997) linked strat-

egy to competitive advantage and the resource-based view of an organization. The resource-based view of an organization emphasizes organization-specific capabilities and assets as the key determinants of organizational performance (Penrose, 1959; Rumelt, 1984; Wemerfelt, 1984). Teece, Pisano and Shuen (1997, p. 509) identified firm-specific capabilities that can be sources of competitive advantage (dynamic capabilities) and they can be organization-specific capabilities and therefore not imitable. Some studies discuss the practice of combining performance management and strategy and linking strategic objectives with organizational outcomes (see Atkin & Hage, 1971; Berry, 1994; Daft & Becker, 1978; Johanson, 2010; for more on performance management and planning, see also Boyne & Walker, 2010).

Methodology

Building theory from case studies is a research strategy that involves one or more cases in order to create theoretical frameworks (Eisenhardt & Graebner, 2007, p. 25). This qualitative case study methodology was chosen because it has proven to be a good method for understanding strategy formation and strategy content (see, e.g., Mintzberg & Waters, 1982; Kotha & Vadlamani, 1995) and for creating a theory based on the empirical studies.

In addition, as Johanson (2010) concluded, due to various organizational changes and reforms in the public sector, it is difficult to consider the whole sector through the lens of various tasks, processes, goals and assets. He suggested that an agency is probably a suitable unit to study when examining strategy formation.

The case study in this paper is the Finnish Police. This case study is part of a longitudinal study. The organization under study has given us comprehensive access to secondary material and allowed us to interview key personnel.

For the purposes of this paper, this research project is limited to the time period from 2000 to 2012. The time period is long enough to capture changes in strategy development and the factors causing the changes. Data collection in this study is based on eight semi-structured interviews done between 2007 and 2012. The data has been validated through follow-up questions with the interviewees and additional secondary material, such as organizational documents, minutes, presentations and emails.

The case organization is examined from the perspectives of performance management and strategy development. The following sections discuss changes relating to the strategy concept and performance management during the years 2000–2012. It also discusses the change drivers that influenced strategy development and communication. Moreover, the performance management process and indicators in the case organization are also described using this timeframe.

Background: Exogenous change drivers

Exogenous change drivers that happened during the research period were related to changes in the economy, to globalization and internationalization, and to changes in the organization and technology. These change drivers contributed to strategy development and indicator development. However, they were not the only reasons for strategy changes. Other reasons included the requirements for efficiency, transparency and accountability and changes in other agencies and departments within the government.

In Finland, the recession in the early 1990s led to the restructuring of public sector organization and to many reforms, such as privatizing public sector agencies and outsourcing certain tasks. This trend continued in the years 2000–2012: the Finnish Police faced organizational reforms when the Finnish Government Shared Services Centre for Finance and HR (PALKEET) began in 2009 to provide financial administration and human resource services to central government agencies. Another reform took place in 2006 when NETRA, a reporting service provided by the State Treasury, began to openly report the performance and expenditures of the Finnish state and give out information about its personnel. It is a collection of official docu-

ments concerning the budget and economic and operational planning.

Also, the regionalization and outsourcing of certain tasks and organizational units changed the organizational structure of the Finnish Police and its processes: the Police Technical Center (PTK) in 2007, the Police College (currently POLAMK) in 2004 and the Police Information Management (PTHK - Police Information Management Center, currently called Haltik - ICT Agency) in 2002 all experienced organizational changes.

The process-based view of the strategy in 2000–2004

The start of a new millennium witnessed many changes in information systems. In addition, Finland signed the Schengen Agreement in 2001 and started to develop new information systems to support the Schengen requirements. The EU community added other international dimensions to consider: cross-border crimes, human trafficking, drugs, and so forth.

The Balanced Scorecard (BSC) was introduced as a new performance management and strategy tool. There had been several pilot projects in the years 2000–2004 as well as working group meetings to introduce the new tool to the whole organization (Police department, 2001, 2002a). The new strategy tool had four different key areas: personnel, finance, society/environment and processes to follow. Different indicators were planned for each area. A multi-dimensional performance management model was required to support the performance management process and different strategies. Such a tool would make it possible to develop and control the different areas of police work. The BSC -tool was used to develop a resource and performance management plan for the following three years (Police department, 2002b).

The key processes were discussed and described in internal working groups in the years 2003–2004. It was the first time that the key processes were defined at the police department. The process-based view was important in order to develop indicators for the different processes. These indicators were applied to the BSC matrix to support the performance planning and reporting function within the organization.

It was acknowledged that control and accountability required accurate and quantified performance data and a multidimensional reporting system. The required data was acquired from the data warehouse, the *POLSTAT - Police Statistics* reporting system that was developed during the years 2002–2004.
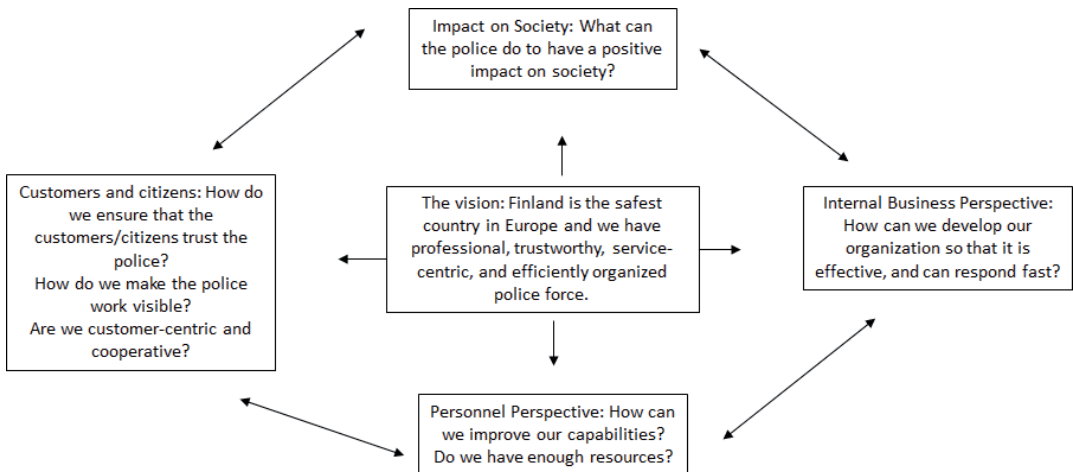

Figure 1. Balanced Scorecard model used by the Finnish Police (cf. Kaplan & Norton, 1992, p. 72).

The process to create the vision and the new strategy actually started in 1991 with the Government Resolution. The Government Resolution dated 26.4.1991 requested the increase of efficiency and productivity in the Finnish government.

The Police Department at the Ministry of the Interior was chosen to be a pilot organization to test the new performance management system and the strategy tool called the Balanced Scorecard in 2000. In 2000 to 2003, the Police Department organized the performance management process within the police organization and to organize the activities on a yearly schedule.

The managers felt that it was important to link the strategy with the key processes and their indicators in the organization. Therefore, a new vision and strategy for the Finnish Police was defined in 2004. The strategy of the Finnish Police described the future goals for the next 10 years. This was the corporate-level strategy for the whole organization. There were also several other strategies for each business sector.

In addition, the government decided to launch a new Internal Security Programme in 2004. The programme aimed to enhance cooperation and collaboration between different government agencies to improve internal security (Ministry of the Interior, 2004). It was felt that the BSC supported the goals of the new Internal Security Programme because it already followed the business indicators and reviewed changes in the operational environment.

The BSC used by the Finnish Police was seen as a strategic management tool that assisted officers in following the processes and goals of the programme in an effective way. The strategic goals were seen as part of a strategy process that need to be reviewed as the operational environment changes. The key indicators of each sectorial area were used to indicate and track changes in the operational environment.

The key performance indicators (KPI) at the national level were developed during the BSC project, and they are still being used today: a street safety index, a traffic safety index, license numbers, the number of detected crimes, the number of emergency contacts and operational readiness in different types of tasks.

The planning-based view in 2005–2007

The Common Assessment Framework (CAF) for self-assessment and quality purposes was piloted in different police departments and national units in 2010–2012. The results of the CAF were mainly positive: it was seen as a way to conduct a self-assessment of the organization and its tasks. It was also seen as a managerial tool.

In addition, the performance management, controlling costs and usage of resources were seen important. Also, comparability between government agencies was seen as essential in order to reduce the overlapping tasks, inefficiency in resource use and monitoring costs.

The Ministry of Finance guided the development of the new performance management tool (Performance Prism) and in part facilitated the content management and cooperation among ministries. This new performance management tool was first introduced in 2003 (Ministry of Finance, 2003). However, it was not taken into account by the Finnish Police until 2005. The Performance Prism had four different areas to follow: personnel, finance and quality, processes and impact on society. Even if The Performance Prism seemed to be comparable to the BSC framework, it was more focused on result-based planning and the accountability of the public sector agencies, on monitoring cost-efficiency and on reporting the results. It also made it possible to compare different government agencies when they all used the same framework and had similar areas and indicators in common areas: for instance, when reporting human resources and financial figures.
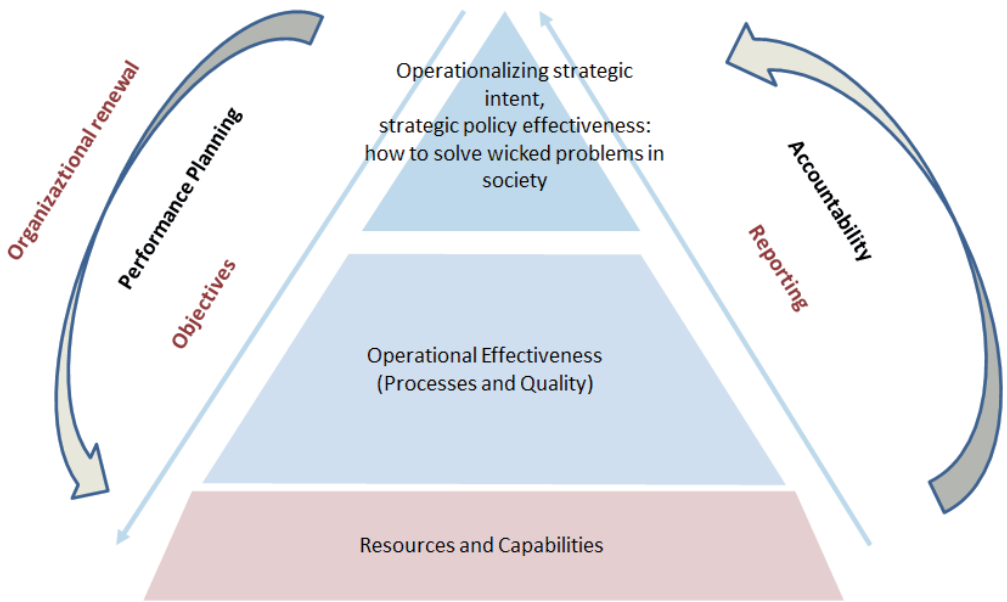
Figure 2: Modified Performance Prism (Ministry of Finance, Performance Handbook, 2006).

The Finnish government's vision for performance management reform was to have a nationwide review of performance, resource management, responsibility and accountability in the public sector. However, it was also noted that a new performance management system could cause "gaming" in the results or focus on a specific subarea instead of considering the big picture. However, the concepts were not clear: What does it mean in terms of the effects on society? Are the indicators supposed to be linked together or not? It seemed difficult to introduce a new strategy and performance management tool because the Balanced Scorecard had just been introduced and used for performance management and planning.

The Performance Prism tool considered the different units and local police departments as separate units. This was due to the organizational model in place, where the Ministry of the Interior was supervising the police organization. Different sectorial activities were followed and reported using the performance management process and directed according to the annual focus areas.

The Ministry of the Interior, especially the police administration department, conducted an annual review of performance in different sectors. Since the strategic goals had been translated into yearly performance targets on the operative level, this practice provided a link between the strategy and the performance management systems.

The performance targets for each unit or police department are negotiated in the yearly meetings. These targets are based on long-term strategic guidelines and the operational and financial plan for the next five years at the governmental level. The commonly agreed upon performance goals are later on translated into team-based, sector-based or individually-based yearly goals.

It was felt that strategic planning and performance management were linked together. Several strategies were introduced, for instance a grey economy strategy and a community policing strategy. These new strategies did not seem to affect the performance management and indicators. The endogenous changes were related to the changes in top management and reorganization of the police department.

Reorganization in 2008–2009: PORA I and II

PORA II was seen as part of an administrative reorganization of the Finnish Police: the former county administrative police departments were dismantled and their tasks were integrated with those of the local police departments. Helsinki Police Department's organizational structure was reorganized.

PORA I reduced the former 90 local police departments to 24 police departments. This was seen as being necessary in order to improve efficiency within the administration and also to fine-tune the processes within the organization. Streamlining the organization was necessary due to the diminished amount of resources and the contracting economy.

PORA II divided the strategic and operative tasks of the management into those of a two-tier organization: the police department of the Ministry of the Interior was responsible for the strategies and the National Police Board was responsible for operational guidance beginning 1.1.2010.

Overall, this period was characterized by organizational changes, process changes and the integration of different police departments under the new National Police Board. It was also characterized by the old organization versus the new organization and by the responsibilities and tightly integrated organization of 24 police departments versus those of the previous 90 police departments. Planning seemed to be one of the key elements in this phase: planning to prepare for the future challenges, planning for coordination, planning to reach the strategic goals with fewer resources.

Some new KPIs were added to performance management in order to have a broader view of the different parts of the organization and their sectorial performance. These new indicators were as follows: how many students graduated from the Police College each year and the amount of time it took to investigate financial crimes. The financial crimes were a new area to follow in performance management. It became more important because of the European Commission also prioritised it in its strategies.

New two-tier organization in 2010–2012

The Finnish Police have had a two-tier organization since 2010. In this new organizational model, the government guides police activities through objectives included in the Government Programme.

The Ministry of the Interior is responsible for guiding and supervising the police. The National Police Board directs and guides operational police activities. It directly supervises the local police departments, the national police units, the Police College of Finland and the Police Technical Centre. The National Police Board is responsible for guiding the performance of these units, and its duties are to plan, develop, direct and supervise policing, cooperation between police units and guidance and resourcing.

At first, the roles and responsibilities of the police were not so clear with the new two-tier organization. Overlapping processes and tasks were seen to hinder planning. However, it was also noted that police funding was not going to be enough to support the current organizational structure with 24 police departments and national units, and therefore, the new organizational restructuring plan called PORA III began in 2012. It required reducing the administrative staff, fine-tuning the processes, organizing the National Police Board to be more effective and reconsidering the division of tasks between the National Police Board, the national units and the police departments. Also, a PORA III phase was planned in order to strengthen the organizational management structure by reducing the police departments from 24 to 11 and integrating the Traffic Police with the local police.

The concept of strategy in 2000–2012

The concept of strategy changed and evolved between 2000 and 2012. Strategy as a concept was seen as ambiguous. A corporate strategy was something that concerned the whole organization. However, there were also other strategies. Some

strategies were seen as being more of a dynamic process, some as a programme with a start date and an end date, and some as a plan with future goals. Some strategies were considered "game plans" or tactical plans for tackling problems and challenges that might arise (e.g. cross-border crimes, organized crimes). Some strategies were part of daily operative management rather than long-term guidelines, and finally, some strategies were considered management tools for improving performance, customer satisfaction with services and cost-efficiency in services. Due to the many meanings and implications of the strategy concept, it was difficult to communicate all of them or any of them to different levels of the organization.

How was the strategy developed? It was noted that some strategies were learning processes: learning by doing. They start from local police departments (operational needs) and then management gets interested and eventually it becomes "a real strategy" with national goals and partnerships (who to work with, networking), evaluations and measurements. Some strategies were "given" or forced: for example, political guidance and programmes require strategies for certain operations and sectorial topics (e.g. terrorism, extreme radicalism). Also, European Union-directed goals for each member state dictated certain strategies. Some strategies were based on a management vision: making changes in the operational environment and doing what needs to be done in order to reach the stated goals. Some strategies were put in place due to negative or frequent feedback from the community or media ("something needs to be done").

As there were many important areas and strategies to consider, only a few key areas and indicators were chosen for the purposes of this paper. Some indicators were still the same as in 2000, for instance the street safety index and the number of detected crimes. Keeping and monitoring the same indicators allowed the managers to see a development trend over the course of a decade. However, focusing on certain sectorial areas and keeping the

same indicators for many years can cause authorities to overlook new challenges in the operational environment, for instance Internet-related crimes and their impact on society and police work.

The "old" indicators were measuring strategically important areas like the number of detected crimes. But it was also seen important to report certain key figures to the government (accountability) every year. Using the same key figures every year made it easier for the top management to see the changes in operative environment or in the way the police had prioritized its resources yearly. The resource management was critical in performance management.

Reorganization made it difficult to see the changes related to the operative environment because the organizational changes caused changes in priorities and available resources in different regions.

New Internal Security Programme prioritized the cross-sectorial and inter-organizational cooperation and required resource allocation in its specific activities.

In addition, it seems that the performance indicators are not linked to hot topics in the media and the current power play of political parties. They seem to stay the same year after year.

The reasons for successful strategy implementation were that the managers and the organization tried to develop repeatable models that incorporate the strategy in front-line activities (e.g. community policing). The managers worked with front-line employees to create a set of non-negotiable working methods and values that embody the strategic goals. Efficient strategy communication ensured that all of the important information and decisions were communicated to all levels of the organization and that the feedback was received and acted upon. In addition, it was seen as important that the organization was able to adapt quickly to changes in the operational environment and change its strategy and strategic goals accordingly. It was noted that the strategy could not always be static, but must evolve according to changes in the operational environment.

Strategy communication in the years 2000–2012

Strategy development, result-based management, planning and performance management all required strategic communication in order to reach the different levels of the organization. The employees needed to be motivated to make improvements in both quality and efficiency. However, if the employees did not understand how their own tasks were related to strategy and organizational goals, then the goals were difficult to achieve and motivation was lacking. The reasons why employees were motivated and interested in improving quality and efficiency had to do with the following reasons: money, interesting job, job security, enjoyable workplace culture, good relationships with co-workers and superiors, and a good workplace atmosphere.

Information flow between the different parts of the organization was seen to be a challenge. It seemed that the employees complained about not getting information, whereas the management thought enough information was being communicated when necessary. Information was available but not in time or for the right employees.

Employees viewed strategy as being distant and not connected to their daily work. There was a gap between the strategy process and planning the real, day-to-day operations.
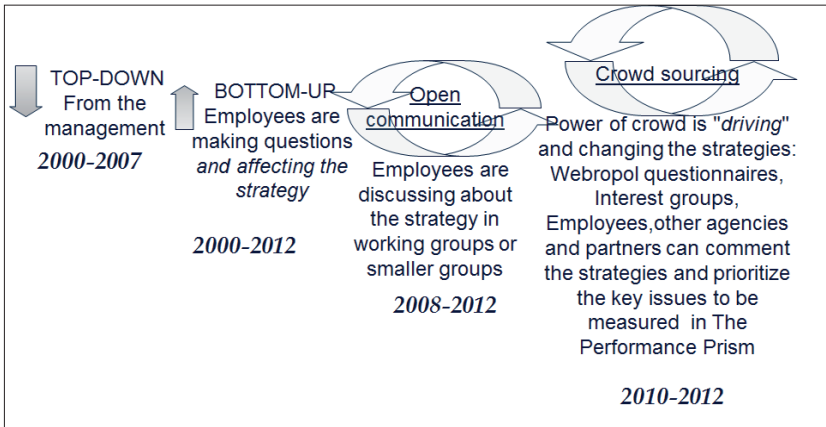

Figure 3. Strategy communication in 2000–2012 (Modified from Aaltonen, 2007).

Figure 3 illustrates the strategy communication methods between the top management and the other levels of the organization. It was not easy to adopt and communicate the strategy goals. During the period 2000-2007, the top management used the top-down process to introduce the strategies to the employees. They also tried the bottom-up method, allowing employees to ask questions, participate in the strategy process and also affect strategy formation. However, it was still difficult for the employees to see how their own tasks were connected to the strategy in question. When trying to link the strategy with the performance management indicators, it was difficult for employees to see how their own tasks were related to a specific performance indicator that was part of an administrative task. It was easier to understand the indicators related to police work when they were directly connected to the tasks at hand.

An open communication method was used in 2008–2012 when employees were allowed to discuss the strategy in working groups and also in more informal groups and what should be done about it. When the employees felt like they could participate and have an effect on their future and tasks, then they were more motivated to work towards the common goals. Also, they were able to introduce important sectorial information when planning future goals, such as the status of joint operations with other countries, organized crime or seasonal differences in different parts of the country.

Crowdsourcing was also experimented with in the strategy process for the years 2010–2012. It was seen as important to test the power of new technologies and to allow the viewers to express their views on what should be implemented as part of the strategy and what should be the key areas to concentrate on in the following years. It was difficult to see the benefit of the method when the viewers did not have any background in or knowledge of the sectorial area in question, and the answers ranged from being useful to not being so useful. However, it was important to allow the employees, the interest groups and the other agencies the possibility to influence the strategy and goals regardless of whether any of their replies were taken into account. The crowdsourcing method was seen as important for gathering a great deal of information and opinions from the "masses" at a fraction of the cost of having consultants gather the information.

As a collaborative strategic planning tool, crowdsourcing was seen as a method to gather ideas and collect weak signals and information about trends and megatrends in the operational environment.

The challenges in strategy implementation

Even if those involved agreed about the strategy concept, it was not always easy to implement. Sometimes the government programmes were conflicting and overlapping, or the orders on how to implement the strategy were conflicting at the local level. In addition, local interests and priorities sometimes took precedence over implementing a new strategy. Too few resources at the local level could also result in implementation problems. There were also challenges with information systems: the existing information systems were not designed to be management reporting systems and there was not enough measurable data to follow up on the strategies.

Organizational restructuring and the ICT changes caused difficulties in reaching strategic goals. In addition, too many strategies implemented at the same time caused a resourcing problem at the local level. Finally, developing strategies to solve criminal problems in a society is challenging. For instance, the problem of terrorism can have many causes. Existing, conventional processes fail to tackle the problem, and when a terrorist attack is successful, it can generate undesirable consequences. In addition, problems like terrorism can recur and change over time. When you find one solution for tackling it, the terrorists will find new ways to attack or a new technological innovation to use in the attacks.

Figure 4 illustrates how the government reforms in the years 2000–2012 have had an impact on case organization. It also describes how case organization has coped with the changing requirements. The major change drivers are linked to performance management and strategic goals. The improvements in performance management, resource usage and cost-efficiency can also be seen as having positive impacts on organizational renewal in the form of different programmes and projects, new capability development and cooperating with other organizations.

The ICT Agency and revised reporting and financial services changed the organizational structure, processes and tasks of administrative and technical services. The accountability and transparency requirements improved due to the online NETRA reporting system. Even citizens were able to view the yearly result-based management reports online. The common reporting platforms and frameworks were required in order to improve the government's policy control and strategic management tools used to monitor different agencies.

The availability of the police statistics on different areas of police activities improved the quality of reporting. The common performance management framework and process improved quality, cost-efficiency and resource usage due to mandatory reporting. The managers followed up on how the organization was able to reach its goals. Cross-sectorial programmes, such as the Internal Security Programme, assisted in inter-organizational cooperation. EU funding as well as national technology and innovation funding aimed at cross-industry and cross-sectorial cooperation and led to new products, services or software. Capability development took place as a result of the new projects and shared knowledge and information. Also, the government organized mentoring programmes in which the senior staff coached junior employees. The joint projects and cross-sectorial programmes allowed the organizations to discover and utilize their distinctive knowledge and capabilities in their own areas of business. The efficient management and coordination for following up on the strategic goals required cost-consciousness and concern about the results. However, it was not so easy to change the culture of a public sector agency and make it a cost-efficient and effective organization. Benchmarking and best practice cases were useful for duplicating the good working methods and practices in other areas of business. The managers received training to develop their managerial capabilities. In addition, cross-hierarchy cooperation was also important, especially in terms of the requirements for reducing costs and resources.
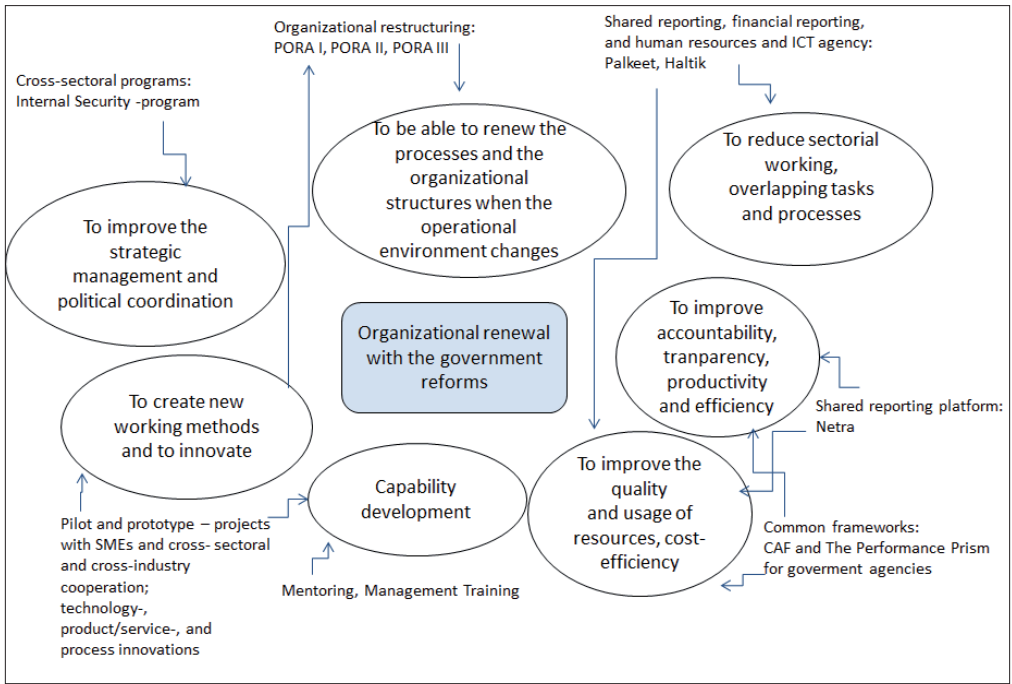

Figure 4. Reforms in 2000-2012: major change drivers are linked to performance management and strategic goals.

In addition, the government felt that inter-organizational cooperation was the right way to have a positive impact on society (Ministry of Finance, 2012, p. 13). The joint operations, working groups and programmes increased cooperation and improved the joint results in strategically important areas.

Public sector organizations, like the case organizations, have civil servants that have worked there for many years. This can lead to a situation in which the diversity of knowledge and expertise is insufficient. The open communication and crowd-sourcing that were used in this case are methods to gather diverse views and information from the masses. An open communication method can be used to gather important front-line information from the employees, whereas crowdsourcing can be used to gather information from different parties. The McKinsey Quarterly (2012) recommended using the crowdsourcing method for collaborative strategic planning. It can lead to many useful strategic start-ups and projects if used successfully. Environmental scanning and analysing the information for weak signals, trends and megatrends can be important when deciding on future strategic goals and planning for future resources (see Hiltunen, 2010).

Co-creation with collaborative partners to create new products and services was also a novel incentive and has thus far received positive feedback due to shared investment, cost-effectiveness and shared goals. Shared goals are important because the organization needs to focus on some key areas in order to excel in these areas.

Conclusions

The primary contribution of this paper is in understanding the challenges involved in linking performance management with strategy and strategy implementation. This research project followed one government agency for more than a decade in order to understand the strategy and how it was developed and linked with performance management. Also, the performance management tools changed during the timeframe of this study.

Performance management was influ-enced by the organizational restructuring, new Internal Security Programme's activities and media's hot topics. It seemed that towards the end of the decade the media's influence become more imminent than before. In addition, the European Union and Commission influenced the KPIs by introducing new strategy to reduce financial crimes. It seems that topics like cyber strategy, financial crimes, radical extremism and terrorism are global problems. But just being a global problem does not automatically make it to a new KPI. The top management needs to see the topic as a growing problem that can need more resources in the future.

Providing an explicit definition of the strategy is also of utmost importance when an organization faces significant changes in its operational environment and/or organizational structure. The main managerial challenge for creating and implementing a strategy is to identify and effectively manage interdependencies between each of the business sectors because the main managerial challenge is in allocating resources between all sectors and the related project managers in each area. In addition, there can be cross-sectorial benefits in reviewing and monitoring each business area and the projects together from time to time. Monitoring strategy implementation can also be a situation-specific decision based on mutual trust between the managers and the executing parties.

On the other hand, this paper helps to understand the essence of strategy and the challenges of public sector performance management on a general level. This may be relevant, for instance, for decision-makers and politicians when monitoring the results.

This research project highlights central managerial issues that arise when implementing a strategy and what challenges those involved will need to face when implementing a particular strategy. It is difficult to see how a new strategy was linked to the performance management process because the KPIs remained the same year after year. The performance changed due to organizational restructuring and process changes. National strategies did not always change the performance indicators.

Correspondingly, this paper discusses

the reasons behind successful strategy implementation. This research project may be useful in providing explanations as to why some agencies are successful and others fail in strategy implementation in different situations and contexts.

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12 KNOWLEDGE-BASED POLICING IN A BUREAUCRATIC POLICE ORGANIZATION

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Introduction

The very structure of a police organization, which is usually characterized as para-military-bureaucratic, is often claimed to be the main source for the problems that frustrate both police leaders and officers in their daily activities, that increase their level of stress at work and that decrease the quality of the services they provide to citizens. The standard remedy, suggested by reformers, is to introduce a new organizational structure with fewer layers and ranks, more decentralized decision-making, increased levels of team work, and so forth. This is expected to increase effectiveness, efficiency and social responsibility both in the provision of police services to society and in the organizational functioning of the police. While organizational structures are not treated as fundamentally important in empirical police research, they are the main point of focus for reformers. However, as Maquire (2003) claims, our understanding of the way the police organization is organized and of the true possibilities for changing it is lacking (pp. 40-41).

Arguably, the organizational and operational sides of policing consist of a curious mixture. Policing, Manning (2007, p. 52) argues

> "is realized within a bureaucratic, rule-oriented, hierarchical structure of command and control on the one hand, and a loose confederation of colleagues on the other".

To a large degree, police work is accomplished autonomously or semi-autonomously, not according to the direct supervision and control that the bureaucratic organizational model implies. While explicit rules, formal procedures and inherited practices limit an individual officer's discretion and possibilities to interfere with the life of a citizen, they also bestow upon her or him the right and legal means — occasionally also the duty — to do so.[14] While important organizational decisions are made at the top levels of police departments, it is the patrol officers who decide about whether or not to interfere with the freedom and civil rights, even the very life, of citizens (White, 2007, p. 134).

A characteristic feature of any bureaucratic organization is the keeping of files. Without doubt, police records and information systems are a main resource both in solving crimes and in preventing them. A significant part of an officer's daily work is directly or indirectly related to knowledge about whether or not to add new information to the database or to apply the information provided by it to a particular situation. Police work is thus fundamentally about knowledge; it is both record-centred and information-centred. This accounts for its character as a bureaucracy. Policing work totally detached from its bureaucratic base would become more or less unrecognizable to us. Furthermore, bureaucratic practices, which are often experienced and pointed to as a main source of frustration and stress for individual police officers, are also in place to maintain and enhance equality between citizens in terms of law enforcement, the provision of police services and maintaining order.

This article discusses two models of knowledge-based policing and their or-

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14 "Some police have argued that departments have become so rule-oriented that (1) it is impossible for a police officer to remember every single rule, regulation and policy; and (2) it is impossible for apolice officer to go a single day without violating a rule or regulation in the policy manual" (White, 2007, p. 130).

ganizational contexts. As Carter and Carter (2009, p. 313) argue, supporting an intelligence-led policing initiative in a law enforcement agency sets certain requirements for its organizational infrastructure. However, I believe that the intelligence-led model of policing respects and reflects the governing ideals and deep-seated images typical of a bureaucratic organizational setting. An alternative model, which is called the knowledge-based model here, challenges these ideals by inspiring and drawing upon other kinds of organizational principles and images. This article outlines these two models, discusses briefly their organizational contexts and thereby contributes to the evolution of the concept of intelligence-led policing (see Ratcliffe, 2008, p. 64).

Bureaucracy — a natural companion to policing?

It is generally acknowledged that police organizations are bureaucratic by their nature.[15] Actually, it is difficult to imagine them in any other way; as Max Weber (1978, p. 991) claims, bureaucracies are technically the most developed power instruments in the hands of a controller. There is an inherent or organic link between policing as a function or institution in society and the operational ideals or organizational principles underlying it.

> "Bureaucracy is the means of transforming social action into rationally organized action. Therefore, as an instrument of rationally organizing authority relations, bureaucracy was and is a power instrument of the first order for one who controls the bureaucratic apparatus." (Weber, 1978, p. 987)

The bureaucratic character of a police organization emerges naturally in any democratic society. An institution with the right and power to enforce laws in society is likely to at times clash with the entitled rights and freedoms of its individual members. Hence, it is rational for the latter to keep such an institution under public scrutiny and to expect a clear and thorough structure of responsibility from it, too. Members of society thus have a special interest in claiming accountability, especially in legal terms, from those entrusted with police powers and in closely controlling the circumstances for their legitimate use. The authority given to the police to enforce democratically enacted laws and, if necessary, to limit the freedom of individual citizens is controlled by that same society. Maquire (2007, p. 93) claims that police organizations are perhaps even more than any other type of public service institution embedded in and affected by the social and political aspects of their organizational environments.

Weber (1978, p. 983) sees bureaucracy as a natural extension of modern mass democracy — the levelling of the governed.[16] Demands related to "equality before the law" result in an abstract regularity of the exercise of authority. The interests of the members of democratic societies in matter-of-factness and rational, publicly accountable governance resonate significantly with the way the police are organized.[17] Displaying such rational ideals of public governance in its structures and modes of operation is all but futile. The legitimacy for police actions derives from the politically agreed upon and democratically set rational-legal framework that encompasses the whole society. Police officers should follow and respect the laws that

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15 "Today's police organizations are designated in accordance to Max Weber's bureaucratic model" (Rasor, 1999, p. 140); "The police department is a bureaucratic organization ..." (White, 2007, p. 128); "The paramilitary-bureaucratic structure has outlived its usefulness in providing optimum organizational effectiveness and efficiency" (Rasor, 1999, p. 144); "The quasi-military structure of police organizations is quite rigid and unforgiving" (Oettmeir, 1992, p. 33).

16 Democratization, according to Weber (1978, p.985), did not transform the masses from the governed to those that govern, but it changed "the way in which the executive leaders are selected and the measure of influence which the demos, or better, which social circles from its midst are able to exert upon the content and direction of administrative activities by means of 'public opinion'".

17 The military organisation, unlike the police organization, directly reflects the prevailing ideals of operational effectiveness and efficiency.

they are entrusted to serve and enforce, and the organization itself helps guarantee that officers accomplish this first duty of upholding the law.

The demands for legal, rational and publicly accountable governance dictate our possibilities for organizing the police and policing. The police are an indispensable part of any society that strives to make democratic progress according to the rule of law. However, Weber (1987, pp. 985-991) notices also an inevitable conflict between democracy and bureaucratic tendencies — the power of bureaucracy and the role of expert knowledge. A completely bureaucratized administration constitutes a practically indestructible system of domination (Weber 1978, p. 987).

Principles of bureaucratic organizational resonate with or directly reflect more fundamental beliefs about society. For instance, there should be clear jurisdictional areas that limit authoritative activities. These activities should be highly standardized, written down in the form of duties, organized hierarchically into tasks and carried out on the basis of the best available knowledge. The hiring, firing and promotion of public officials should be based on rational criteria emphasizing true expertise in, skills for and dedication to the respective field of specialization. Everyday operations should proceed on the basis of clear and exhaustive rules that derive from the principles and ideals of rational-legal governance and practical effectiveness. Bureaucracy as such, Weber (1978, p. 990) warns, is a precision instrument at the disposal of quite varied interests.

It is one thing to figure out whether such balanced, effective, impartial, objective and machine-like organizational apparatuses exist at all in the world or to evaluate how well our current institutes of public administration measure up to these ideals. It is another thing to ask whether we believe that those very principles represent a rational ideal for organizing the exercise of public authority and legitimate use of power in society. Arguably, the spirit of bureaucracy is a fundamental feature of any democratic society (see Hilbert, 1987, p. 74). The police cannot but adapt its structures and modes of operation to it:

"What produces empirical behavior is a belief in formal rules as determining factors in routine action, as that which should as a matter of duty be 'followed', as that which seen and unseen others are following, and as legitimate by virtue of their presumed rational impersonality, their exactness, their stability, and so on." (Hilbert, 1987, p. 77)

The unique position of the police in society, and the role that both a spirit of bureaucracy and a bureaucratic spirit[18] play in determining it, insulate police organizations from those influences that shape and reshape organizational structures in other sectors of society. Actually, Maquire (2007, 206) claims that it is not necessary to know about the context in which a police organization operates to be able to predict the overall level of its structural complexity.

It is commonplace to argue that bureaucratic structures are best suited to handle routine tasks in a stable environment (e.g. Rasor, 1999, p. 141). However, one can easily miss the constitutive role those structures play in the emergence of such an environment. The environment for any organization is mainly made up of other organizations. We should not only ask whether a police organization operates in a stable, dynamic or even turbulent environment, but also pay attention to its impact on the very stability of such an environment, its own dependency on it and its intimate relationship to other institutions and factors fundamental to it. According to Weber (1978, p. 972),

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18 Weber (1978) characterized bureaucracy as monocratically organized hierarchy of office authority where everyone derives her or his position from above and is set for a career within the hierarchical order. She or he expects to proceed to a more important and better paid position and has a strong status sentiment that is compatible with his or her readiness to subordinate him- or herself to his or her super-ordinate and to integrate him- or herself into the given functional conditions of the office place. She or he carries out her or his duties and her or his entrusted tasks obediently and virtuously as a personally detached expert, i.e. without love, hatred or other personal elements that escape calculation.

"Among purely political factors, the increasing demand of a society accustomed to absolute pacification for order and protection ('police') in all fields exerts an especially persevering influence in the direction of bureaucratization".

The most transparent organizational response — the one most available to the police — consists of a simple structure with a clear hierarchy of ranks, functional differentiation, strict lines of responsibility from the very top to the bottom and control-oriented supervision. New demands for police services are met by creating new functional units that resemble the prevailing ones but that have their own field of specialization. Consequently, the organization retains its formal outlook and generates management problems related to coordination, communication and control as the interests within the organization diversify and internal disputes over budgets, status, priorities, operational authority, etc. escalate (see Ratcliffe & Guidetti, 2007, p. 113). New administrative roles dedicated to such things as coordination and operational procedures, information systems, blankets, principles and values are often introduced to tackle these problems. A complex, often managerially heavy, and practically non-manageable bureaucratic structure evolves from it.

As Rasor (1999, p. 142) reckons, fitting the flexible, problem-oriented, customized delivery of police services into a rigid, uniform structure introduces many difficulties. A bureaucratic organization that faces new challenges in its environment can either treat them as a part of its routine tasks or differentiate its structure by creating new offices or functions to handle them, i.e. compartmentalize. However, such differentiation increases complexity and the costs of coordination and control. For Lemieux (2008, p. 231), it is clear that that intelligence-led policing brings with it new demands for decision making (i.e. flexible) and structure (i.e. decentralized), which allow an intelligence unit to adapt its activities to variations in its environment and to delegate authority to the professional managing the flow of information. According to him, such a unit or agency should lean towards an organic structure (Ibid., p. 232).

Intelligence-led or knowledge-based policing represents a recent organizational innovation in police organizations. It also represents a challenge to the very structure and mode of operation of the police organization. Meeting this challenge calls for rethinking, reflection and, possibly, organizationally or operationally reforming the police.

Bureaucracy and knowledge

Knowledge is essential for the operation of a bureaucratic organization in at least two senses. On the one hand, bureaucracies are run by functionaries and officials who are well-trained for their respective function — ideally perfect cogs in a ceaselessly moving and perfectly balanced mechanism of methodically integrated functions (i.e. expert's knowledge). On the other hand, knowledge signifies the system of files upon which, according to Weber (1978, p. 988), all organizational order depends. Bureaucracy seeks to enhance the superiority of professional insiders by keeping its knowledge secret and, thus, by excluding public criticism — bureaucracy naturally prefers a poorly informed, and hence powerless parliament (filed knowledge) (Ibid., pp. 992-993).

However, Manning (2007) argues that a structural feature of a police organization, one that shapes policing, is being fact rich, but information poor:

"Police information consists in collections of scraps of data, quasi-secret and secret intelligence files, an amalgam of out-dated context-specific information, and a layered archaeology of knowledge." (Ibid., p. 52)

It is often claimed that police officers follow rules of thumb in their work, not true knowledge built on properly analysed data and critically scrutinized experiences that provide a scientifically warranted basis for their activities. Police practice is displayed as a lacuna not only in terms of knowledge, but also in terms of reflective practice and learning. In an increasingly progressive world, or at least a world striving to make

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progress, such an occupational orientation and the dependence on traditional, culture-bound or habitual ways of acting is seen to lead to a suboptimal process of learning from experiences and, therefore, to organizational inefficiencies and professional inadequacies:

"Many perform heroic police acts, but few have the training and expertise to reason analytically. (...) In most instances, effective decisions are not intuitive in the moment; superior decisions follow evidence and analytical thinking." (Baker, 2011, pp. iii & 199-200)

In the prevailing order of things, everything that does not work, first of all in theory, is treated with suspicion. It must either be conceptualized in theoretical terms proper or cast aside as folklore, guesswork, rules of thumb, myths, humbug, etc., that, like intuition or "the copper instinct" (Ratcliffe, 2008, 18), prevents or compromises true professional improvement in police practice as opposed to paving the way for them to come to fruition:

"there is a lot of theoretical work to be done before we can declare that we have entered a new era of policing ... and are now thinking within a new paradigm, supported by the concepts of knowledge and network". (Brodeur & Dupont, 2008, p. 28)

Knowledge-based (KBP) or intelligence-led policing (ILP) have become captive, if not even totalitarian ideas for how to improve policing. Although there are different views on the core concepts, there is also a general movement to adopt them (Carter & Carter, 2009, p. 315). However, Alach (2011, p. 80) claims that one should not expect any success unless all of the necessary pieces are put into their proper places and used accordingly. Under any totalitarian scheme, the blame for the possible failure or the lack of success of a particular measure rests always fully on the shoulders of the one who attempts to apply such a change. As such, his or her competency in putting such a solid and complete operational philosophy or framework properly and wholly into operation is at stake, while

at the same time the supposed solidness and completeness of the system itself serves to insulate it from critical scrutiny.

If one follows Alach's (2011, p. 79) idea of intelligence-led policing and emphasizes the need to analyse and synthesize information for the purposes of knowledge enhancing situational awareness and providing for the actions related to it, the main issue appears to be the source of such information: where to find it, how to collect it, how to transform it into useful data or fit for purpose knowledge products, how to put such products to effective use both in the police organization and in society at large and how to learn efficiently and productively along the way:

"The conceptual core of formal ILP is simple: gathering information about the criminal environment, processing that information into intelligence through analysis, identifying priority areas, and then using a process to make decisions about allocating resources to priorities." (Alach, 2011, p. 82)

"In ILP, police management proactively determines, on the basis of 'objective' analyses conducted within the organization, how resources should be deployed; the intelligence supporting police decision making is produced largely without input by the public." (Brodeur & Dupont, 2008, p. 18)

"Intelligence led policing is a policing philosophy that features the following traits: it is managerially centered and top-down in decision-making format; it is proactive; it is informant and surveillance focused with heightened attention directed toward recidivists and serious crime offenders, and it provides a central crime intelligence mechanism to facilitate objective decision making." (Ratcliffe & Guidetti, 2008, p. 112)

ILP is set apart from its predecessors by its cognitive orientation and its emphasis on decision making. However, from the very beginning policing has relied upon gathered, filed and, perhaps informally, processed information as the grounds for proa-

ctive or preventative policing. For Alach (2011, p. 83), the true distinction does not lie in the philosophical core of ILP, but in its formal, procedural and methodical surface (*cf.* Carter & Carter, 2009). This is likely to enhance the position of the intelligence unit within the police organization and reduce the role of others in progressively understanding the challenges prevalent or forthcoming in their operational environment (Alach, 2011, pp. 85-87). ILP has been understood as intelligence-driven policing also (Baker, 2011, p. 4).

In a networked society, hierarchical forms of police governance appear to less and less fit their original purpose, as the governance of the police is increasingly becoming the governance of policing. Information and knowledge are no longer confined to the few at the top, but spread throughout the organization; they are generated by all nodes within the network (see Williamson, 2008):

"In the information society ..., knowledge work is irremediably embedded in these networked structures". (Brodeur & Dupont, 2008, p. 29)

"Knowledge-based policing is envisaged as responding to technological and social drivers that are leading to an emerging new policing paradigm whose purpose is the management of risk. (...) Knowledge-based policing therefore poses a serious challenge in terms of effective regulations which is likely to go well beyond the 19th century bureaucratic forms of regulation that currently exists for the governance of police forces." (Williamson, 2008, pp. 6-7)

It is possible to use the terms intelligence-led policing and knowledge-led policing synonymously. However, in the following section they are delineated as two different concepts with diverging organizational implications.

Intelligence-led vs. knowledge-based policing

According to Brodeur and Dupont (2008), it is not apparent at first sight that police work is fundamentally about knowledge. Knowledge work in policing calls for filling in forms, writing reports and feeding the ICT with data as a mandatory bureaucratic request. The popular media usually depicts the police as a profession dedicated to action, not to reflection. Classical studies on policing focused on figuring out what set policing apart from other social functions and underestimated the complex web of institutions governing security (Brodeur & Dupont, 2008, pp. 19-29). Formal documents are not just an inevitable bureaucratic feature, but also a source of power and constitutive to respective practices, subjectivities, work processes, the organization itself and, especially, the objects of police work (see Hull, 2012).

The knowledge most respected and treasured in policing has traditionally been case-specific, investigative information relevant to solving individual cases. Individual police officers with knowledge of the streets and a feel for villains gained the most respect in patrol cars and canteens. The relevant learning took place in the mind and understanding of individual officers who applied their knowledge to track down and arrest offenders. The growth of expertise was further fostered by specialization, i.e. allocating cases to detectives on the basis of the categorical features of the offenders. Digitization brought an increased amount of relevant data to policing both in terms of police performance and the spatial and temporal patterns of crime events. This data served as a strategic information base for managing resources, priorities and decision making regarding long-term operational and tactical issues. However, criminal events focused or criminal knowledge, culminating in the work of analysts, who gained more and more ground on solving crimes as a result of this offender-centred knowledge. This era of new knowledge comes with the potential to change the core values and organizational modes of operating in policing work (Ratcliffe, 1998, pp. 205-207, 2008, 208):

"The strategic intelligence assessment should be regarded as a core product in any intelligence-led approach to policing, crime reduction and improving community safety. Indeed, the philosophy underpinning the need for SIA means that such practices should be automatically accepted on its intrinsic merit, and therefore, immune to political and organisational change." (Chainey & Chapman, 2013, p. 19)

The deck has thus been stacked for the emergence of specialized units within the police organization dedicated to collecting such data and to screening strategically and tactically relevant pieces of knowledge based on it. As Ratcliffe (2008) points out, the skills and types of analyses differ from the intelligence required for solving individual crimes. It requires computer dexterity, analytical ability, database management as well as reporting skills — no wonder then that crime analysts may feel like outsiders in relation to police culture (Phillips, 2012, p. 16). Being able to detect crime or offender patterns and being able to transform them into knowledge becomes possible with the use of a relevant and adequate theoretical perspective (Ratcliffe, 2008, p. 211):

"As ILP focuses on threats, it becomes essential to identify variables within a community and the surrounding region that support the generation and maturation of crime. (…) It is important that the information collected provide insight on the existence of the conditions, factors that will exacerbate the conditions, and individuals who may be instrumental in exploiting the conditions to commit terrorism or crime." (Carter & Carter, 2009, p. 317)

The idea of intelligence-led policing builds upon the everyday functioning of modern bureaucracies, i.e. the systematic gathering and filing of information about the numerous objects and state of affairs in society. Systematically gathered information appears always as a potential source for new understanding, learning and knowledge, though not directly so. While relevant knowledge used to cumulate as a result of ordinary police work, i.e. basically as the result of the police bureaucracy (see Chainey & Chapman, 2013), with intelligence-led policing knowledge formation is the function of a separate organizational unit and a distinct field of expertise. It is expected to enrich the knowledge base of the police organization by going beyond its traditional limits with respect to the local and the individual (see Ratcliffe, 2008, p. 217). Knowledge is seen as a special accomplishment, an end-result or a product. While traditional knowledge is likely to retain its practical value in police work, at least the status and creditability of its individual holder will become contested. Proper knowledge is no longer something individually or intuitively grasped, but something tangible, systematically produced and thoroughly validated by a group of experts:

"The requirement that police information or intelligence be thoroughly validated before being considered to be knowledge and acted upon is proportional to its potential for harm." (Brodeur & Dupont, 2008, p. 29)

ILP is seen as a way to respond to the evolution of criminal problems, to deal with the loss of public confidence in the police and to increase the effectiveness and efficiency of the police. Lemieux (2008, p. 234) sees it as advocating police cooperation and the multi-lateralization of information exchanges within joint organizational structures. To fully benefit from ILP, police organizations need to revise their structures and cultures to stimulate interpersonal trust in the sharing of information, intensify feedback on the use of the intelligence produced, promote organizational learning as well as encourage innovation (Lemieux, 2008, p. 235):

"By establishing more gateways with the outside world and the various institutional players working in the area of law enforcement and internal security, police organizations will be better able to understand and integrate environmental changes in carrying out their mission." (Lemieux, 2008, p. 236)

It is not enough to enrich the traditional police organization by introducing a new function to it and establishing intelligence units to carry it out. It is necessary to promote an atmosphere of learning and to design information-processing processes and procedures that promote the production and use of knowledge throughout the organization (Lemieux, 2008, p. 236). In New Zealand, those police departments that have implemented ILP most successfully and benefitted from it were felt to be less formal by the officers and were seen as being more supportive of learning, participative approaches and broader involvement (Darroch & Mazerolle, 2013, pp. 18-19).

ILP emphasizes knowledge work as a separate organizational function. This function calls for a new kind of professional expertise in the field of crime analysis. Analysts will have a more strategic role in the organization.[19] Their expertise should culminate in knowledge products that fit the purpose, enlighten the decision-making process both on a strategic and tactical level, and inform decision makers about developments in the criminal environment (e.g. Baker, 2011, pp. 88-91). It is this idea of knowledge turned into various actionable intelligence products to facilitate decision making that gives ILP its business-like character (cf. Ratcliffe, 2008; Ratcliffe & Guidetti, 2008). Its three cornerstones are those of the decision maker, the analysts and the criminal environment. Its main impact is mediated by a hierarchical system of positions, where information moves upward and cumulates at the top, becomes transformed or packed into intelligence products, and then descends back to the bottom in the form of strategies, tactics, principles, orders, plans, guidance, etc. — what Carter and Carter (2009, p. 318) call

actionable intelligence. The frontline police officers appear as sources of information and executors of better-informed plans (e.g. Phillips, 2012; Carter & Carter, 2009):

"the patrol officer must be trained to regularly channel that information to the intelligence unit for input into the intelligence cycle for analysis". (Carter & Carter, 2009, p. 322)

ILP fits perfectly the basic principles of a bureaucratic organizational structure. It emphasizes a hierarchy of positions, which reflect systemic differences not only in power but in knowledge and understanding as well. ILP seems to complete the ways in which the police bureaucracy functions instead of challenging or changing them. It promises to restore or strengthen the position of commanding police officers who have found themselves increasingly distanced from police work at the frontline by the shear growth in police bureaucracies. After implementing ILP, a police bureaucracy should be an efficient precision instrument in the hands of those leading and controlling its work.

If police bureaucracies are not doing the right things or putting their efforts in the right places, either because they make the wrong decisions or fail to make the optimal decisions, then ILP appears as an improvement. However, if the way in which a police organization is currently organized is the main source of the problems that frustrate the personnel, then making that organization even more perfect may not alleviate those problems at all. As Darroch and Mazerolle (2013) suggest, the commitment of police officers rather than their compliance that is required in order to successfully implement ILP:

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19 An analyst interviewed by Ratcliffe and Gordetti (2007, 121) states that, "I do like being at the captain's level because I like having that access and influence". It is expected that incorporating sound social science and statistical information in the decision-making process will lead to the evolution of sound and effective policies for crime reduction (e.g. Baker, 2011, p. 43). This would demonstrate the practical relevance of the social sciences and confirm the value of their services to society.

"Our research shows that the emergence of a distinctive subculture associated with the strong uptake of ILP innovation. The ILP subculture had the following characteristics: a broadly accepted focus on crime reduction as the overarching goal for local police, support for partnership and problem solving as legitimate policing strategies, tolerance for experimentation and trial of novel approaches, support for ILP, a willingness to follow ILP leadership, openness to learning, and a willingness to participate and contribute to improvement and general innovation." (Darroch & Mazerolle, 2013, pp. 17-18)

Carter and Carter (2009) define the main features of their concept of ILP in contrast to the Compstat process. Compstat is a tool for reducing and preventing crimes on the basis of analysing and mapping crime incidents and it builds upon the idea of police management being accountable for crime reduction within their jurisdiction. While their depiction of ILP and the way that it differs from the Compstat process is an intriguing one, it also makes one wonder whether contrasting these two concepts serves any practical purpose (see Figure 1).

Compstat	Intelligence-led Policing
Intra-jurisdiction	Multi-jurisdiction
Incident driven	Threat driven
Analysis based on known facts from reported crime data and investigations	Analysis based on tips, suspicious activity reports and information collection
Focuses on crime spree and incident trends with the intent to apprehend specific offenders	Focuses on root causes and conditions that contribute to serious crime and terrorism
Relies on crime mapping, incident analysis and modus operandi analysis	Relies on link analysis, commodity flow, transaction analysis and association analysis
Time sensitive (24-hour feedback)	Strategic (inherently long term)
Predominant focus on street crime (burglary, robbery, homicide, assault, etc.)	Predominant focus on criminal enterprises (terrorism, organized crime, etc.)
Reported criminal incidents drive collection and analytic parameters	Intelligence requirements drive collection and analytic parameters

Figure 1. Substantive differences between Compstat and Intelligence-led policing (Carter & Carter, 2009, p. 321; cf. Baker, 2011, pp. 55-57).

Ratcliffe and Guidetti (2008, 118) acknowledge that any organization featuring a hierarchical command structure is vulnerable to the risks of institutional friction, intelligence hoarding and information silos. Intelligence products may well be rich in details and isolated facts, but they lack any true analytical content (e.g. Chainey & Chapman, 2013). While designing and arranging efficiently gathered data on and around different threats and incidents of crime is a relatively straightforward process, transforming that data successfully into theoretically warranted and actionable or workable knowledge that, simultaneously, meets the needs of the decision maker at the right time and place is another type of accomplishment entirely. As Baker cautions (2011, p. 42), simply collating facts or providing raw data is not police intelligence.

Knowledge in knowledge-based policing refers both to the evolution of practical, communicative, co-operational and reflective capacities and capabilities of the members of police organization and to the emergence of new practices in policing. The emphasis is on the process of knowing and on the continuous growth of a shared understanding, culminating in better social practices rather than in intelligence products. Opportunities for learning so-

mething new open up whenever we face possible problems. If we tackle them successfully, we can then apply our current knowledge, extend it or change it by learning something new. Acquiring new knowledge, learning new skills and developing new capacities are phases or moments in this continuous process:

> "Problem-oriented policing requires police to delve deeper into the underlying problems that affect the safety and security of the community they serve. This requires police to be able to scan the broad array of information sources they have access to, including calls for service, recorded crime, informants and the community, and to reclassify these requests for assistance or action into aggregations not based on bureaucratic categories but as items associated with an underlying problem." (Ratcliffe, 2008, p. 71.)

Obviously, adequately understanding the deeper problems that plague communities and tackling them effectively is a task that no police department can accomplish on its own. Their resolutions call for cooperation and collaboration between experts, with community groups and with individual citizens and also for sharing knowledge, combining efforts, experimenting and engaging in mutual learning. A combined effort at solving or alleviating deep social dilemmas is more likely to stem from a process of joint sense-making than from simply telling or dictating the scientific truth about the dynamics, structures or mechanisms behind specific criminal incidents. Furthermore, as there are several theoretically warranted ways to interpret and conceptualize the root causes of any criminal activity, and, accordingly, to derive logically sound ways to tackle it, the proper ways to proceed should be based more on an analysis resulting from an open discussion and critical debate between those involved than an analysis resulting from having acquired a mastery in the use of analytical tools.

While Ratcliffe (2008) acknowledges that ILP and problem-oriented policing closely resemble each other in many dimensions, his definition of ILP underlines their differences more than it celebrates their similarities. For him, ILP is essentially a management philosophy that employs a top-down approach and aims at crime reduction, the prevention of crimes and the disruption of offender activity by using crime intelligence to direct decisions on the allocation and use of police resources and by focusing on prolific and serious offenders (Ibid., pp. 87-89). While his model for policing is quite sound managerially, it is unlikely to enjoy long-term success as a crime prevention strategy. He makes ILP fit perfectly into the bureaucratic principles according to which the police organizations and their activities are governed. Thus, when understood this way, ILP simply refines the way police and policing are currently managed, while the true challenge is in turning them around, in putting the emphasis on effective crime prevention and in enhancing the strategic role and professional expertise of the frontline police officers.

An effective response to this challenge calls for rethinking the nature of ILP and policing. The police should be seen as a potential contributor and, at best, a vital part of solving the deep or encompassing problems that plague many communities, not the sole, primary or self-sufficient crime fighter. In the long run, police services in terms of crime prevention can be most effectively provided by combining and aligning various local forces, different kinds of knowledge, varied interests and all types of efforts involved in partnerships. The police organization should facilitate and support such collaborative work and ways of policing. In its current form, it works very much in the opposite direction. It encourages the confinement of knowledge rather than creating and sharing it with others and distributing it, especially to outsiders. Whenever new challenges have arisen within its field of operation, it has responded by differentiating the roles and responsibilities and by establishing new functions, units and forms of expertise. This is simply a dead-end and ILP, as it is defined by Ratcliffe (2008), only helps the organization travel towards this end point at an accelerated speed.

Knowledge-based policing should materialize in joint efforts that active-

ly draw in and combine expert and local lay knowledge, turning them into experiments that aim at solving local safety and security issues and problems. It should cumulate in experiences and observations that can be analysed and interpreted together and, in the long run, developed further both in line with locally supported, purpose-built practices as well as skills and capabilities for putting them to good use. Knowledge would thus be created close to the very sites where it can most make a difference. The analyses would focus on local experiences and they would derive from concrete local needs. Action plans would be discussed, redefined, implemented and evaluated on the basis of shared understandings. The knowledge would gain added value by distributing it, not by confining it (see Figure 2).

	ILP	KBP
Growth of Knowledge	Number and quality of actionable intelligence products.	Increased capacities to become involved in joint learning, shared sense-making and planning of joint actions as well as in the building up of social practices essential to such collaboration.
Main Challenges	How to unveil something intended to remain hidden (criminal intentions and activities as threats to safety and security), how to turn the data into actionable intelligence and how provide the latter to the right person at the right time.	How to respond effectively to the causes for criminal activities, how to adapt the police organization to meet the requirements of collaborative work and how to motivate police officers to dedicate their problem-solving capacities to crime prevention on a long-term basis.
Increased capacities	Better decisions and intelligence-informed strategies, tactics and plans for the allocation of scarce police resources for crime detection and prevention.	New co-operative practices and new ways to act in collaboration with relevant others that are personally, organizationally and communally enlightening and socially efficient in alleviating problems that undermine safety and security.
Efficient response	A distinct function calling for a group of experts – the analysts – with direct access to the decision maker, new processes for the efficient design, delivery and dissemination of intelligence products, and customer education so that those products are put effectively into action.	New expertise, skills and orientation to police work, more highly educated police officers with professional problem-solving capabilities, orientation to crime prevention and motivation for collaborative action and continuous learning within a system of management that recognizes the strategic role of the rank and file as crime preventers, facilitates their participation to joint efforts and is ready to learn from them, too.
Analysis is understood as	A distinct cognitive accomplishment in which the patterns, trends and tendencies in diligently gathered pieces of data are figured out or in which a bigger picture is put together from fragments of information, weak signals, hints, etc., resulting in written reports that provide recommendations or suggestions for action to the decision maker.	Embedded within joint activities and collaborative work that proceeds from getting involved in joint activities, builds upon mutual trust and an open exchange of ideas, experiences, viewpoints, interpretations and theories, deals with values, needs and priorities, identifies and draws in relevant parties, establishes new social relations, enhances and enlarges social capital.

Organized action	Demarcates the organizational head responsible for processing knowledge and making decisions and the organizational hands responsible for carrying them out.	Integrates thinking, doing and learning and makes management accountable for this.
Increased wisdom	Directly related to one's position in the organizational hierarchy, culminating in "the wise old man on the top".	Directly related to one's role in social networks, culminating in her or his participatory and communicative capacities, expertise gained from previous joint efforts and the success of the management in supporting his or her professional development as an efficient partner and expert in policing matters.
Operational logic	"Know thy enemy"; enhance safety by increasing your intelligence in detecting crimes and disrupting offenders.	"Know thy partners"; enhance safety by increasing their number and involvement and the quality of mutual collaboration, understanding and learning

Figure 2. Main contrasts between Intelligence-led policing and knowledge-based policing.

Bureaucracies are good at providing standardized services on a regular basis. However, they are also inclined to become the first victims of their past success as needs and demands change. Police organizations have been structured to support and maintain a narrow commitment to a reactive approach when responding to service calls and maintaining public order. This is also what is expected from them by the public. According to Oettmeier (1992, p. 36), this offers a very limited role to a police officer, with no need for information support, planning or independent thinking; a role that instead stresses his or her supervisor's controlling role. The move from fulfilling this reactive function to a more proactive orientation, and further, to a coactive mode of policing requires making both structural changes and expanding the roles and responsibilities of the rank and file. A proactive orientation calls attention to the responsibility of police officers for taking action, using information actively, thinking about tactics and taking the initiative in terms of objectives, but it does not provide the public with a true positive agency in policing. The coactive mode is based on the premise that the police have been assigned a duty that they are unable to accomplish fully with their own capacities and powers. It is thus necessary to combine various forces stemming from different groups of citizens and from varied professional backgrounds and to initiate joint learning in partnerships (Oettmeier, 1992). Police organizations, if they are not to become obsolete, should be more focused, creative and flexible in responding to this very purpose, more responsive to dynamic and culturally diverse communities, and more partnership-oriented and coactive as partners assisting others and seeking assistance from others. The idea of knowledge-based policing as outlined in this article points in this direction.

Conclusion

Scholars have argued that the most effective organizational changes should be coupled with a new overarching philosophy or build upon one (Ratcliffe & Guidetti, 2007, p. 110). However, history seems to confirm the strength of prevailing organizational structures to co-opt such reforms and the philosophies they advocate. While the names of the bureaus and units may change, their hierarchical structure tends to remain the same.

As Carter and Carter (2009, p. 316) suggest, the creation of the concept of ILP through an inclusive development process requires creativity, organizational introspection and a willingness to make changes to the organization. While including intelligence as a specific new function of the police organization may well enhance the rational allocation of limited resources, it is hardly enough to resolve its enduring organizational shortcomings. Instead of increasing the intelligence of a few, the process should increase the involvement of the many and create opportunities for mutual learning and expand the sense of responsibility, partnership and collaboration among them. It should make it easier for local partners to collaborate with the police when dealing with crime and community safety issues (Chainey & Chapman, 2013, p. 24).

I have suggested the concept of knowledge-based policing to capture and characterize the requirements for coactive policing. We should look beyond the idea of knowledge as a precious bureaucratic asset best kept secret or as a highly refined intelligence product only fit for managerial purposes or the task at hand. Knowledge should be seen as a joint, but always only a temporary, accomplishment in the ongoing process of knowing, or as a moment of agreement that is doomed to lose its significance eventually and to fade away. In a changing world, it is only the process of knowing that really matters. Skills for participation, the will to get involved and an interest in mutual learning underlie creative joint actions in this world. As Ratcliffe argues (2008, p. 63), the vision of intelligence-led policing and problem-oriented policing acting in complementary fashion is timely indeed.

The key phrase here is continuous joint learning, learning stemming from and used for mutual collaboration and co-operation with various partners to improve safety and security both locally and globally. The key question is how police management can best develop and sustain such capacities and capabilities throughout the police organization and keep up with the rate of learning that results when those capacities are put to work in partnerships and through collaborative efforts. Frontline police officers are not just a source and feeder of information to the intelligence process and consumers of the intelligence products in their fight against crime. In knowledge-based policing, they play a key role in making communities safer by working intelligently with other groups, experts and individual citizens and learning from that work as well. Policing, if it is to eventually fulfil its purpose, should engage strongly in constructing better functioning social entities on every level. Its main task is thus related to enhancing such entities and, if necessary, to its responsibility in building them up in collaboration with others. It is going to be a creative process that empowers the organization and creates new capacities, a shared understanding, better practices and, perhaps, even unforeseen social institutions.

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