Predictive Policing - Is It Really an Innovation?

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Abstract
The novelty of predictive policing, its goals and promises, are put under criticism and discussion. In the last few years predictive policing has been presented as a new model for law enforcement activities. Predictive policing is based on the special skills of statisticians and computational scientists who run sophisticated techniques to analyse data available in disparate sources, to anticipate and prevent crime and disorder. Hence, a shift in the police work could be envisaged, a change of ‘paradigm’ (T. Kuhn). This “new” model appears to be rooted in the last century 70s and 80s ‘new penology’ with its actuarial approach, where numbers produce the individual. Further back in time, its roots can also be found in the 19th century vision of J. Bentham, when he proposed a ‘moral arithmetic’ for the benefit of governmentality (M. Foucault). A predictive regime requires organisational capabilities and structures, a new way of thinking and (perhaps) new leaders. Police forces would have to be able to effectively make use of the findings of predictive research. Yet, some police forces still don’t recognise the criticality of science and research. And, let’s not forget that information is not knowledge, as it is ‘indifferent’ to meaning and does not consider people’s ‘intentional states’ (J. Bruner). So, it seems the individual is lost in the mechanics of discovering patterns. But it takes only one person to disrupt society...

Keywords: innovation in police activities; policing models; predictive policing.

Introduction
The novelty of predictive policing, its goals and promises, are put under criticism and discussion. Three main ideas are the core of this discussion: (1) some of the roots of predictive policing, and what appears to be the design of a ‘new’ individual; (2) the preparedness of police forces to ingrain predictive inputs, and the shift in the police work; and, (3) the way the outliers from a normal distribution are treated when the widespread practices induce to consider group traits.

In the last few years predictive policing has been presented as a new model for law enforcement activities, or as being the future of law enforcement (Haberman & Ratcliffe, 2012; Munk, 2017; Pearsall, 2010; Perry et al., 2013). Predictive policing is a model based on the special skills of statisticians and computational scientists who manage to operate sophisticated techniques to analyse all data available in disparate sources, with the major goal of anticipating and preventing crime and disorder.

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The roots of predictive policing

To achieve equilibrium within and between States, each one has to know the figures about its population, production, commerce, natural resources, financial situation, and so on... This information became available during the XIX century, when statistics started to be systematically published and the confidence in the rigour of numbers and measures was increasingly asserted (Smith et al., 2000).

How was statistics established? Foucault (2007: p.411) said ‘it can be established precisely by police, for police itself, as the art of developing forces, presupposes that each state exactly identifies its possibilities, its virtualities. Police makes statistics necessary, but police also makes statistics possible’.

The roots of the actuarial approach can be found in the XIX century vision of Jeremy Bentham, the father of utilitarianism, where his Introduction to the Principles of Morals and Legislation (Bentham, 1781/2000) and ‘Pannomion: Complete Body of Law – a complete and rational code aimed at «command and instruct»’ (Ost, 2001: p.291) – would provide for the principles of a legislation dedicated to search for the greatest amount of happiness for the greatest number of people through a ‘moral arithmetic’ and the calculation of pleasures and pains.

He criticised the legal system as well as society and proposed the reform of some institutions that were supposed to discipline people and society, like prisons, schools and welfare services. In his most known proposal – the Panopticon – he presented an architectural model that presupposes confinement, inspection (observation), vigilance, discipline, and, of course, registering. If correctly applied, these principles would allow for the control of the whole society, thus enabling the ‘disciplines’ to operate as ‘techniques for assuring the ordering of human multiplicities’ (Foucault, 1995: p.218) or to assure ‘governmentality’ (Foucault, 2007).

But he struggled with the absence of numbers that would let governments to adequately rule their societies. Bentham took advantage of some statistical methods to collect, record, and analyse data from the institutions, so that it could be useful to its managers, and even sent them some questionnaires to be completed (Brunon-Ernst, 2007). His interest in the use and utility of numbers was applied to morality, which could be mathematically calculated through the balance of pleasures and pains, thus presenting an economy of pleasures (Bentham, 1840).

To sum up, we can see that the actuarial methods were, already in the XIX century, in place to support governance and governmentality. On the other hand, this “new” model appears to be rooted in the last century 70s and 80s ‘new penology’ with its actuarial approach, where numbers produce the individual, putting aside idiosyncrasies, wishes, fears, and of course responsibilities.

The ‘new penology’ is an expression coined by Malcolm M. Feeley and Jonathan Simon in 1992. One central feature of this ‘new discourse’, as they argue, is the substitution of ‘a moral or clinical description of the individual with an actuarial language of probabilistic calculations and statistical distributions applied to populations’ (Feeley & Simon, 2000: p.367). Building on the use of a strategy to acquire knowledge about the criminal phenomenon, it would allow for a different perception of the existing problems and potential solutions, and thus for greater effectiveness of the employed resources at the lowest possible cost.

The individual – the ancient unit of analysis and intervention – is to be replaced by behaviours or ‘observable data’ (Cohen, 1995: p.147), enabling the segregation of the dangerous from the rest of the population. This resulted in the spreading of several offending behaviour programmes targeting specific groups of offenders (e.g. violent, sex, drug and alcohol related offenders), following the ‘what works’ (Martinson, 1974) and ‘nothing works’ debate regarding the effects of rehabilitative interventions on recidivist offenders (e.g. Hollin & Palmer, 2006). This movement of criticism had its most prominent force during the last quartile of the XX century, when the increasing violence of some criminality as well as the recidivism of ‘treated’ offenders and the cost of the rehabilitation techniques was in the centre of the debate, leading to the rejection of the idea of treatment of offenders (Ancel, 1985). Mainly during the 80’s, there were some political and public opinion sectors demanding for an adequate response to that violent criminality ‘through a rigorous repression, opposing the legal violence to the illegal one’ (Di Argentine, 1991: p.26). As some had put it, ‘the «resocialisation treatment» was the big idea (or the great illusion) of the 50s’ (Ancel, 1987: p.10), and its evaluation led to its abandonment and the emergence of a more neutral one: the idea of intervention (Tsitsoura, 1990).
Resting upon actuarial techniques allowing for new ways of managing the social order, the new penology ‘employ[s] the language of social utility and management, not individual responsibility’ (Feeley & Simon, 2000: p.367). As Cohen (1995: p.147) wrote, it is ‘the most radical form of behaviourism imaginable – prevention of the act of crime by the direct control of whole populations, categories and spaces’. Indeed, the main idea was to be able to respond quickly and locally, to limit contagion effects and manage social risk.

So, ‘(…) the new penology is neither about punishing nor about rehabilitating individuals. It is about identifying and managing unruly groups. It is concerned with the rationality not of the individual behaviour or even community organization, but of managerial processes. Its goal is not to eliminate crime but to make it tolerable through systemic coordination.’ (Feeley & Simon, 2000: p.368)

As such, the new criminologists, for instance, are increasingly ‘trained in operations research and systems analysis’ (Feeley & Simon, 2000: p.375), rather than sociology, psychology, or social work. Furthermore, this new approach provides significant information about the successful intervention strategies and the performance of the institutions themselves. So, even if at the beginning the individual characteristics were searched and highlighted for comprehensive intervention or parole issues, for instance, today, in the actuarial criminology, as Feeley and Simon (2000: p.376) argue, ‘the numbers generate the subject itself. (...) [By] rationalizing the operation of the systems that manage criminals, not dealing with criminality (...) [these techniques] can be used to improve the penal system’s efficiency’. In addition, this also illustrates what happens in many curricula at some police academies: the disinterest in human and social sciences.

On the other hand, Loader (1999: p.373) wrote about the ‘commodification of policing and security’. He argued that ‘since the early 1980s especially, the imperatives and vocabulary of the market have come increasingly to infuse the rhetoric and practices of the public police’ (Loader, 1999: p.375). The police appeared to be more and more ‘business-like’ – managerialism; the police was delivering a ‘professional service’ to the ‘consumers’ (citizens) of that service – consumerism; and, the police was embracing the task of openly promoting its ‘product’ – promotionalism. It is so, nowadays. Though maintaining its basic legally-based bureaucratic model, the police are increasingly operating within the market paradigm.

This business analysis and management approach, with the outcomes mainly treated in terms of numbers, became prevalent. The financial constraints police face nowadays demand for it. So, the language of numbers is deeply embedded in the police activity; its managerial costs, the crime figures, what the citizens want and embrace, and the number of followers and likes in different platforms. As Harcourt (2007: p.16) put it, ‘risk assessment, algorithms, and criminal profiles now permeate the field of crime and punishment’. The question one must ask, here, is if this is to minimise the costs for society or police organisations.

It might be said that statistics shape our world, leading us to perceive reality differently. Statistical data help to reinforce stereotypes because of the way data is collected, categorised, run by computational programmes, and analysed. The unshakeable faith on actuarial methods, ‘by accentuating and aggravating the correlations between group traits and criminality’ (Harcourt, 2007: p.192), will end by changing our world with us behaving differently and relate differently with each other.

**The preparedness of police forces to ingrain predictive inputs**

A predictive regime requires organisational capabilities and structures, a new way of thinking and (perhaps) new leaders. In this regard, a shift in the police work could be envisaged; a change of paradigm in the sense of Thomas Kuhn (1970). That would mean a new way of perceiving reality, new tools to analyse and intervene, and new shared discourses. But it also means that there would be

‘a criterion for choosing problems that (...) can be assumed to have solutions. To a great extent these are the only problems that the community will (...) encourage its members to undertake. (...) [This also means that some] socially important problems (...) [might be discarded] because they cannot be stated in terms of the conceptual and instrumental tools the paradigm supplies’ (Kuhn, 1970: p.37),

which is to say, in this case, the police organisation and culture supplies. Numbers generate the individual and also the social problems, determining which ones
should be carefully dealt with and rejecting others. And it is somehow imaginable the interest some political forces might be willing to devote to this matter.

To begin with, police forces would have to be able to effectively make use of the findings of predictive research. Yet, some police forces still don’t recognise the criticality of science and research (Jaschke et al., 2007; Weisburd & Neyroud, 2011), though the language of numbers appear to find a definite space in police organisations. At least with regard to budgetary demands... This “new” model seems to accommodate a police force that is not so demanding with what knowledge application is concerned. Rooted in the works of Drucker (1995) who coined the expression ‘knowledge work’, and Ericson and Haggerty (1997) who saw the police as ‘knowledge workers’, Brodeur and Dupont (2008) stress that

‘the police are considered to be knowledge producers, but they do not even fulfil the requirement of being knowledge appliers, which is to have a formal education. Unless the requirements for formal education are made much more rigorous, this situation is a prescription for disaster.’ (p.17)

But from what is known today, there are still many police agencies [which] do not see science as critical to their everyday operations’ (Weisburd & Neyroud, 2011: p.3), and do not see the need of an academic degree to join a police force or to be promoted as senior police officer. On the other hand, even though police forces show the curiosity and motivation to accept and incorporate new technologies in their activities, they usually have no deep knowledge to evaluate the studies prior to its presentation or to study its effects on police work (Weisburd & Neyroud, 2011). Besides, the police institution is usually suspicious about anyone who shows some interest in its activities (L’Heuillet, 2001), and so there is still a great deal of scepticism regarding the scientists and researchers’ work within the police contexts. This is, nevertheless, a strange posture if we think how helpful and powerful an external validation of some practices can be. In fact, police decision-makers could ‘benefit immensely from having a respected academic representative (...) affirming that the choices and decisions made by the police follow best practices developed by research, study, and assessment’ (Engel & Whalen, 2010: p.106).

Welten (2010: p.12) once said that ‘a brave police force deserves courageous scientists’. But as scientists became increasingly courageous and interested in researching in police topics it is also important that the police institution do not see researchers and research results as a verdict of guilt. The idea of being evaluated is fierce, and restrains either the possibility of developing research or the publication of its results in scientific journals because they can damage the image of the police (Weisburd & Neyroud, 2011).

That is to say police officers may not be – or feel – obliged to have a formal education to be knowledge appliers. Rather, they may simply fulfil the task of collecting information as its analysis will be performed by others – now by men, further ahead by machines. It seems ‘we have allowed technical knowledge, somewhat arbitrarily, to dictate the path of justice’ (Harcourt, 2007: p.3). The resulting knowledge – or, shall we say information? – will be mostly used by police managers to better plan police operations, as it allegedly allows for accurate deployments considering the identified patterns and forecasted trends. This last goal seems to be, nowadays, a major issue given the financial constraints police forces are facing. Furthermore, the increased scrutiny by the citizens raises the question of whether they are willing to pay for the police service, and for which kind of police service. And here, we have to agree with Weisburd and Neyroud (2011) when they state that ‘what is most striking about policing is that we know little about what works, in what contexts, and at what cost’ (p.11).

The way the outliers are(n’t) treated

A major concern in predictive policing relates to how and by whom the data is collected and registered, which data is relevant for analysis, and how it will be transformed in knowledge. Perry et al. (2013) have presented some myths of predictive policing, being one of them the belief that the computer will do all the work. However, as they say, ‘even with the most complete software suites, humans must find the relevant data, process these data for analysis, design and conduct analyses in response to ever-changing crime characteristics, review and interpret analysis findings (and exclude erroneous findings), recommend interventions, and take action to exploit the findings and assess the impact of interventions.’ (Perry et al., 2013: p.XIX)
So, though we are moving back again to the faith in numbers and measurements as it happened in the 19th century with the development of statistics, let’s not forget that information is not knowledge, as it is ‘indifferent’ to meaning and does not consider the people’s ‘intentional states’, in the words of Jerome Bruner (1990). So, it seems the individual is lost in the mechanics of discovering patterns. Actually, ‘we seem increasingly indifferent to individual cases and small numbers’ (Alschuler, 1991: pp.904-905), favouring a nomothetic approach instead of an idiographic one. As Brodeur and Dupont (2008: p.22) state, ‘there is a crucial difference between information, disinformation, and trusted intelligence (knowledge) in the field of HUMINT (human intelligence), with the central concern being the question of validity’.

But, even in statistics the outlier is important because it disturbs the normal distribution of data. And that is precisely what we are looking for: the extreme cases, or the cases that pop-up from the population. Indeed, it takes only one to disrupt society...

Today, this is a major concern for the police forces: the lone terrorist, the one single person who puts all of us in a permanent state of alert and for whom we demand an immediate response. And, as far as we know, there is some evidence that predictive policing doesn’t work in this specific context, because of the ‘mistakes due to a randomness bias’ (Brodeur & Dupont, 2008: p.22) that can result in the identification of too many ‘false positives’ (Brodeur & Dupont, 2008; Munk, 2017). Actually, together with the given unreliability of ‘public and private databases (...) the emphasis placed on decontextualized relational features produces ‘false positives’ and leads to the identification of innocents as terrorists’ (Brodeur & Dupont, 2008: p.25).

Predictive policing does not capture the particularities of the individual, or a specific set of behaviours, or the different sorts of relationships established with other people while assuming different roles when moving through the different social scenarios. It can be said that the police is mainly concerned with maintaining social peace and order, not exactly with the specific offender. But, if this is it, other policing models will also have to be thought over.

This being said, it seems the major topic is the supposedly successful police-control metrics instead of evaluating the police activities in terms of the citizens’ well-being. In other words, it fails to comprehend the background of the phenomena the police forces have to deal with. New forms of criminality, social disruption, individual or group behavioural disorders, must be tackled by being educated about its roots, developmental history, more or less visible relationships with other social actors and within institutions, and assuming the far-reaching effects that each individual’s actions have, backed – or captured? – by the communication technologies. In fact, ‘the determinist speculations at the core of data-mining algorithms fail to account for life’s coincidences, which are not governed by the laws of causality’ (Brodeur & Dupont, 2008: pp.25-26).

**Conclusion (?)**

The ‘network society’ (Castells, 2010) confronts us with immense and immediate information. As a consequence, we feel free to ask for urgent responses to old and new problems and this requires a systematic vigilance of all people by all people. These are the characteristics of the ‘risk society’ (Beck, 1992). Also, people travel more and more, for business or holidays… or to commit crimes. The changes in demography and labour market result in changes in labour relations and the position people occupy in the social structure. Police forces are no longer confronted with just the natives but also with the foreigners. Thus, what derives from the political and economic management of this reconfigured society is something new the police forces have to deal with. Clearly, the police forces have to rethink and redesign their methods, be aware of the scientific and technological developments and, most of all, be adaptable to differences according to the spaces and times people occupy in their lives.

As discussed, the use of statistics is not new and, even more so, it seems that real people are left behind. Let’s be wise not to be absorbed by and transformed in numbers.
References


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