

# Policing in a Digital Age:

## Balance between community-based strategies and technological intelligence

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### Abstract

Digital networks are a “new” environment for organized crime, radicalization, recruitment, terrorism, and disinformation. There is a deterritorialization of threats and risks, making digital networks a new dimension for the expansion of criminal networks and for justice and police.

Nowadays, democratic societies, human rights and internal/external security are challenged by artificial intelligence and other emerging technologies. This “brave new world” has created an illusion within Police and intelligence communities that prioritizing technological intelligence they will obtain immediate and better results.

The central aim of this article is to reflect on security trends in nowadays societies of investing more in hard policing and technological policing and less in community-based strategies.

Artificial intelligence, big data, machine learning, analytical software, predictive techniques based on algorithms are increasingly used by law enforcement. This resulted in a gradual devaluing of community policing and human intelligence and raises a set of ethical, deontological, fundamental rights protection, privacy, and, most likely, the systematic reproduction of biases.

We propose to analyze the benefits for Police to promote a comprehensive approach between HUMINT and TECHINT to allow a better understanding of communities’ idiosyncrasies and to improve the relationship between Police and fragile communities, as well as to prevent threats and risks to our collective security.

We seek to prove the advantages of scientific research and innovation in the digital age, and of a comprehensive approach between soft and hard policing, between community policing and intelligence-led policing, promoting at the same time a permanent dialogue between Police and citizens.

**Keywords:** Security, emergent technologies, community policing, intelligence, human rights.

## Introduction

Globalised contemporary society is increasingly complex due to disruptive technologies (Bower, Christensen, 1995; Immelt, Govindarajan & Trimble, 2009). These emergent technologies are likely to bring many benefits, from increased productivity and economic growth to greater success in tackling global threats, including terrorism and transnational organized crime. But may also impact in civil rights and data protection.

Buzzwords and acronyms, like VUCA and BANI (Cascio, 2020) try to illustrate in a fancy/comprehensive way nowadays volatile, uncertain, complex, and ambiguous (VUCA) world. And with covid-19 pandemic, a brittle, anxious, nonlinear and incomprehensive (BANI) society.

Law enforcement is about crime prevention, crime investigation, public order, police intelligence and international police cooperation (Elias, 2018) and there should be a straight coordination between these five pillars of policing. Checks and balances between prevention and repression strategies are crucial.

Our investigation will seek to answer the following starting question: Will it be possible to build-up a comprehensive approach between community policing, intelligence led-policing, technological policing and robust policing?

The methodology to be used will be of a composite nature, as we will draw on knowledge in the fields of Police Sciences, International Relations, Political Science and Sociology, as well as the intersection of theories and scientific methods. We will choose to carry out a descriptive-theoretical study, based on the bibliographic analysis, legislation, and official documents from different types of sources, both national and international.

We are going to present the results from the report on "Accountability Principles for Artificial Intelligence (AP4AI) in the Internal Security Domain" coordinated by Europol Innovation Lab and the Centre of Excellence in Terrorism, Resilience, Intelligence and Organised Crime Research (CENTRIC) published in February 2022, as well as a national survey carried out in 2021 in Portugal by the Research Center (ICPOL) of the Higher Institute of Police Sciences and Internal Security and the company SPIRITUC (a market research company specialized in

the medical field) on public perception about Police Service.

This article is a theoretical study, and the structure obeys an introduction, state of the art, perspectives (guidelines) and conclusion (practical or theoretical implications).

## State of the Art

As of the start of 2022, there are 4.95 billion active internet users (DataReportal, 2022).

Considering there is a global population of 7.91 billion people and that global internet users have climbed to 4.95 billion at the start of 2022, internet penetration now stands at 62.5 percent of the world's total population.

There are 4.62 billion social media users around the world in January 2022.

And what about crime and world security? According to the *Global Organized Crime Index 2021* "the vast majority of the world's population (79.2%) live in countries with high levels of criminality, and in countries with low resilience (79.4%)". The same document underlines the following:

- human trafficking is the most prevalent type of crime. In 2020, there were an estimated 281 million international migrants globally.
- the second most pervasive criminal market globally is the cannabis trade, which is a worldwide phenomenon.
- firearms trafficking is also worrying at international level.

The organized crime landscape "is characterized by a networked environment where cooperation between criminals is fluid, systematic and driven by a profit-oriented focus" (EU SOCTA, 2021, 10).

Europol underlines that:

- Close to 40% of the criminal networks active in the EU are involved in the trade in illegal drugs;

- 40 % have a hierarchical structure and 60 % are fluid structures;
- 79 % are composed by six or more members and 21 % have up to five members;
- 80 % use legal business structures for their criminal activities;
- 68 % use basic money laundering methods such as investing in property or high-value goods;
- 60 % use violence as part of their criminal businesses and 60 % engage in corruption;
- The use of corruption and the abuse of legal business structures are key features of serious and organised crime in Europe. Two thirds of criminals use corruption on a regular basis (EU SOCTA, 2021, 18).

Criminals are “growing their operational security by hiding their online activity, using more secure communication channels and obfuscating the movement of illicit funds” (IOCTA, 2021, 16). And crime is more and more “crime as a service”, providing goods and services to worldwide (online) consumers.

In the last 40 years, literature and academic studies proposed several policing models to better cope with changing reality and the liquid times (Bauman, 2007). Community policing (Trojanowicz & Bucqueroux, 1990; Monjardet, 1996; Normandeau, 1998), zero tolerance (Kelling & Colles, 1996; Kelling & Bratton, 1998; Kelling & Sousa, 2001), hot spots policing (Clarke, 1986, 1998), broken windows theory (Wilson & Kelling, 1982), evidence based policing (Sherman, 1998), problem oriented policing (Goldstein, 2003), intelligence led-policing (Ratcliffe, 2008) and predictive policing (Selbst, 2017; McDaniel, J. & Pease K., 2021) are paradigms that hold important implications for policing. Several times were combined between each other and there were good practices that had an excellent impact in local communities, but as well badly implemented programs, have not been evaluated and several others got poor results.

These paradigms, despite having a strong rhetorical component (Klockars, 2005, 442), are intended to generate willingness to reform Police organizations and performances.

Indeed, there are contradictory security trends in several western and non-western countries. On the one hand, several governments implement the militarization of policing, others maintain community based-policing strategies and others increase the privatization of

several security areas. On the other hand, law enforcement agencies prioritize more and more technological intelligence, which may bring risks for civil rights, data protection and privacy in nowadays hi-tech brave new world (Huxley, 1932).

## TechPol and TechInt in the Digital Age

The development of new technologies is faster than ever and it’s intensifying social relations on a global scale (Giddens, 2005, 45). Life in the digital age is truly information-driven, with data becoming more valuable than oil (The Economist, 2017). For example, companies will lash out to know what drives customers’ interests. Insights gained from refining data will allow companies to spend money where it should be spent and also increase profits.

Governments and Police state that they seek to improve efficiency and effectiveness in the fight against violent and organized crime. However, budget cuts made governments and municipalities to replace police officers to algorithms in several police departments (Heaven, 2020). Another reason for the increased use of algorithms is the widespread belief that they are more objective than humans (Reiss & Sprenger, 2020; Daston & Galison, 1992, 81): they were first introduced in United States for a fairer decision-making in criminal justice system and now machine learning is being implemented in several courts in other western countries (Heaven, 2020).

HUMINT requires a great deal of time and resources to gather assets and analyze information, rendering it one of the most difficult types of intelligence to produce and implement. The training alone is time consuming. Police officers need to learn

*“(...) foreign languages; conducting, detecting, or evading surveillance; recruiting skills and other aspects of HUMINT tradecraft; the ability to handle various types of communications equipment, information systems, weapons, and so on” (Margolis, 2013, 45).*

Training of these intelligence officers is costly and can take several years to complete. But it’s worth to mention that HUMINT is far less expensive than the various technical intelligence resources, although it still involves costs for training, special equipment, and the accoutrements clandestine officers need to build successful cover stories. The end goal of obtaining ad-

equate, accurate, and actionable information is best attained when HUMINT and TECHINT capabilities are combined (Crosston & Valli, 2017, 76).

An infatuation with technological methods of intelligence gathering

*“(...) has developed within many organizations. As a result of the focus on technical methods, some of the worst intelligence failures of the 20th century can be attributed to an absence of human intelligence”* (Margolis, 2013, 43).

If Police (as well as intelligence services and even armed forces) only support their operations on TECHINT (SIGINT, GEOINT, IMINT, MASINT, CYBINT) they will get just part of the intelligence picture. Thus, it's very important for Police “to put the boots on the ground” to gather HUMINT through crime investigation, intelligence analysts and community policing of officers and to compare it with other sources obtained through TECHINT.

The (minority report) dream of predicting crimes almost came true. But at what price? Algorithms may carry biases (Miller, 2019) and stereotypes that may impact in citizens' rights in our democratic societies, such as the erosion of privacy and other human rights (Noble, 2018, 24). The fashion for data analytics and intelligence-led policing evidence the ‘uberization’ of security control (Sanders & Sheptycki, 2017).

Big Data often presents a façade of apparently rigorous, systematized, mathematical and neutral logic (Sanders & Sheptycki, 2017). Advances in emerging technologies raise a set of ethical, deontological, fundamental rights protection, privacy, legitimacy, public recognition and, most likely, the systematic reproduction of biases (Hunkenschroer & Luetge, 2022).

Emerging technologies and dataveillance (Esposti, 2014; Büchi, Festic & Latzer, 2022) will change policing in the future. Giving some examples about the extraordinary impact of technologies in policing in the present and in the future:

- CCTV systems with alarmist software and patterns that may identify crimes being committed or suspects and objects that may be a risk to public security;
- the use of augmented reality glasses to give criminal context to police officers;
- small autonomous drones programmed to follow police officers, scout locations, and provide video streams so that no officer ever must go into any situation truly alone;
- artificial intelligence and machine learning are key to identify hate speech online, child sexual abuse, recruitment, and radicalization campaigns in social media;
- location-based algorithms, crime patterns and identification of suspects;
- sensors for bomb detection in public spaces;
- IoT connected devices, AI and deep learning to improve connectivity and capacity to process information;
- threat screening for major events (AI and facial recognition software);
- police engagement with the community through social media (sensitization and prevention campaigns, public information, etc.) is also a new form of cyber community policing.

Besides this, the creation of national taskforces on cybercrime (composed of law enforcement authorities, representatives of the judiciary, AI technology developers, criminologists, and global service providers) may serve as a relevant vehicle to coordinate and tackle illicit conducts concerning the misuse and abuse of AI technologies (Velasco, 2022).

Europol Innovation Lab and the Centre of Excellence in Terrorism, Resilience, Intelligence and Organized Crime Research (CENTRIC) published the report “Accountability Principles for Artificial Intelligence (AP4AI) in the Internal Security Domain. AP4AI Framework Blueprint” in February 2022.

After 5.239 answers about the AI use by Police forces citizens see great potential in AI use for safeguarding vulnerable groups and society, including the prevention of future crimes:

- 89,7% agreed or strongly agreed that AI should be used for the protection of children and vulnerable groups,
- 87,1% agreed that AI should be used to detect criminals and criminal organizations

- 78,6% agreed that AI is used to predict crimes before they happen
- 90% of participants expect Police to be held accountable for the way they use AI and for the consequences of their AI use.

AI may be fundamental to prevent and to counter-terrorism (namely online terrorist generated contents), child sexual exploitation (identifying the individuals sharing the material as well as their locations) and serious and organized crime. Yet, although AI and accountability in policing have become a central point of discussion across the law enforcement and internal security sector, they are often discussed in isolation and not as a targeted approach to ensuring accountability for AI deployments. This means that there remains a significant gap in addressing AI accountability within the fields of security and policing (AP4AI, 2022).

Europol supports that:

- law enforcement undercover capabilities are becoming increasingly important in cybercrime investigations. Nevertheless, legal barriers around the retention and sharing of data persist. Data is often not retained for long enough with ISPs, which can lead to a loss of potential evidence. Investigations would benefit from longer data retention. In addition, there is a need for clearer rules for registering IP addresses and domains could increase this data quality. Increased international cooperation is also crucial;
- there is a need for more technically skilled officers, training, and technical solutions to adequately address cybercrime, because of the increased technical sophistication;
- there is a need to establish a broader cooperative focus between public and private sectors to prevent and fight the new digital threats: bulletproof holsters, criminal VPNs, illicit cryptocurrency exchangers, and money laundering platforms.
- law enforcement agencies should be firmly embedded and enhanced within the national cybersecurity crisis management frameworks and clear roles and responsibilities should be assigned to the different competent authorities (AP4AI, 2022), namely defense, intelligence services, police, justice.

## Community policing – policing by consent

There isn't an academic consensus about Community Policing concept. According to a literature review, community policing implies consent, an agreement between the police and the community – policing by consent (Waddington & Wright, 2008).

For several scholars community policing *“is not a technique, it is not public relations, it is not a ‘soft’ strategy against crime, it is not paternalistic, it is not an independent entity within the police, it is not cosmetic, it is not just another designation for social work, it is not elitist, it is not intended to favor the rich and powerful in the community, it is not a panacea, as if poorly adopted it could have disastrous effects on the community”* (Trojanowicz, Kappeler, Gaines, Bucqueroux & Sluder, 1998, 22).

Community policing is crucial to create trust and co-operation between the Police, local communities, and citizens (Goldstein, 1990; Trojanowicz & Carter, 1988) and to produce HUMINT.

One of the fundamental conditions for the sustainability of policing models is their scientific evaluation. Community policing programs, as well as other policing models, must be regularly assessed to check their impact in citizens' perceptions. Besides that, these surveys may be important to know better what community needs are, to improve policing practices and to increase interactions with local communities.

In Portugal, the Higher Institute of Police Sciences and Internal Security coordinated a national scientific survey in 2021 to evaluate citizens' degree of satisfaction with Public Security Police (PSP) work/performance, as well as their (subjective) perception of security in urban areas. A total of 2561 complete/validated answers were collected. Concerning performance evaluation of PSP the following results were obtained:

- 93,1 % positively evaluated the attitude of the PSP police officers;
- 69,6 % considered it good or very good;
- 83,9% positively evaluated the ability of PSP officers to deal with security problems;
- 52,2% considered it good or very good;

- 72.2% positively evaluated the presence of PSP police officers at public areas;
- 43.0% considered it good or very good;
- 81.4% positively evaluated the police response in urgent situations;
- 51.3% considered it good or very good;
- 80.9% reported being familiar with the Safety in School program;
- 77.5% reported being familiar with the Support Program for Victims of Domestic Violence;
- 55.6% reported being familiar with the Support to Elderly People.

These results express a very good opinion about PSP performance in Portugal, excellent perception about communities' safety, as well, it shows an important impact of community policing in Portuguese society, namely the Safety in School Program and the Support to Victims of Domestic Violence.

There isn't academic consensus that Intelligence Led-Policing is compatible with Community Policing (Carter & Fox, 2018). The literature articulates the relationship between COP and ILP along a continuum that ranges from closely related (Carter & Carter, 2009; Clarke, 2006; McGarrell, Freilich & Chermak, 2007; Bullock, 2013), sharing minimal similarity (Tilley, 2003; Innes *et al.*, 2009; LeCates, 2018), and distinctly different (Deukmedjian & de Lint, 2007; Ratcliffe, 2016).

However, both community policing and intelligence led-policing appear to share many core elements, such as an emphasis on proactive versus reactive policing, and two-way sharing of information with the community. Both have a broad and flexible framework to allow these strategies to be utilized as long-term solutions and be customized to the individual needs and strengths of each agency (Carter & Fox, 2018, 15). Both emphasize a more active role of local policing in assisting in issues as counter-terrorism (McGarrell *et al.*, 2007), gang intervention (Charles, 2018), social harm (Mohler *et al.*, 2018; Ratcliffe, 2016), border security and immigration (Lewandowski *et al.*, 2017), about policing the internet to detect organized crime and terrorism, as well to promote sensitization campaigns in social me-

dia in several areas: domestic violence, bullying, drugs consumption, diversity, animals' rights.

Intelligence-led policing has commonalities with problem-oriented policing and targeted, proactive policing (Ratcliffe, 2016, 4). Intelligence-driven policing requires a comprehensive interpretation of all information collected by the police through: surveillance, interrogations, informants, analysis of criminal patterns, sociodemographic information, and other data from non-police sources.

## Militarization and Privatisation of Policing

The shift from community policing work to the crime control militarization didn't start with the 'war on terror' (Rivas, 2013). The change started with the "war on drugs" and the "war on crime" (Meeks 2006).

When we mention militarization, we are not referring exactly to the change from civilian to military status of the police forces, but predominantly to the adoption of hard policing strategies and tactics, as well as SWAT teams (Cox S., Marchionna S., Fitch B., 2017, 86), assault rifles and more ostensive equipment (armored vehicles, ballistic vests and helmets, drones and others).

Many scholars and practitioners express their concern that the "war on terror" is contributing that several police agencies "replace community policing programs with traditional hardline models that give priority to hierarchy at the expense of autonomy, to rules and norms in place of some degree of discretion in police decision and action" (Murray, 2005; Greene, 2011; Mijares & Jamieson, 2011).

Militarization may exert even a stronger influence on what the regular police decide on for uniforms (e.g. military battle dress uniforms – BDUs), how they think, the weaponry and technology they employ, the organizational models they adopt, and the crime control solutions they devise. Community policing call for democratization may be increasingly drowned out by the drumbeats of high-technology militarization (Krasaka, 2007, 12). It is assumed that hard policing increases effectiveness and influences public's subjective feelings of insecurity, with an investment in the security apparatus, overestimating a supposed effectiveness, even at the expense of efficiency. Consequently, in



several countries TECHINT and robust policing are step by step replacing HUMINT, community policing and partnerships between the Police and the communities.

Academic studies mention several risks but also advantages of privatizing policing. On the one hand, private security lack accountability, may bring threats to civil liberties, concerns about loss of public-interest, greater inequality in protection, reputational concerns, threats to police jobs. On the other hand, it may bring increased effectiveness through public/private partnerships, alignment with the ideals of community policing, police may concentrate their efforts in more vulnerable sectors of community, access to specialized skills and technical resources and efficiencies through contracting out (Sparrow, 2014).

The proliferation of private security has both involved the spread of technologies, such as closed-circuit television together with artificial intelligence and the incursion of the private sector into forms of work, or areas of activity, more usually associated with public policing (Newburn, 2008, 826). Recent examples include private security being responsible for airport security, major sports events, cultural or political events, traffic and parking regulation, the transport and guarding of prisoners and, most important of all at a symbolic level, the patrolling of public streets, public buildings, and of the army and the police facilities. In addition, the notion of self-policing within communities and greater use of volunteers to assist public policing may generate a confusing landscape of plural policing in the future (Rogers, 2018, 400-401), mixing and melting traditional missions of Police with new private security tasks in a less accountable and equal way.

There are challenges inherent in the use of plural policing approaches which may affect the very nature of the democratic policing model. Despite criticisms to 'pluralised' policing, it would appear that privatization of security is low-cost, it's a strategy of frontline preventive presence, it may increment the deployment of experts for specific or specialized tasks, and it may also boost research and development of emerging technologies.

## Discussion/Conclusion

Technological development has created an illusion within law enforcement and intelligence communities that prioritizing technological intelligence they would obtain immediate and better results. Artificial intelligence, analytical software, big data, predictive techniques based on algorithms are increasingly used by law enforcement. This will be a challenge for law enforcement but may also result in a gradual devaluing of community policing, human intelligence, and the understanding of community idiosyncrasies.

The results of the national survey coordinated by the Higher Institute for Police Sciences in Portugal show how important is scientific assessment to evaluate policing models and police performance. It shows as well that citizens understand the advantages of community policing-based strategies.

The results of Europol study underline that citizens see great potential in AI and emerging technologies use for safeguarding vulnerable groups and society, including the prevention of future crimes.

Policing has changed, as has the society being policed. The digital age will bring even more challenges. In this context, in the academia and law enforcement community it's necessary to reflect on future policing models that may better prevent and detect new threats and risks in nowadays complex world (Beck, 1992).

Answering to our initial question: despite lack of consensus at academia, an integrated approach between community policing strategy, intelligence led-policing, TECHINT and HUMINT, may be crucial to prevent and fight crime, to maintain a straight relationship with local communities and to improve the quality of police service.

Nowadays emerging technologies bring several challenges for law enforcement community, like the ones mentioned by Europol:

- data is often not retained for long enough with ISPs, which can lead to a loss of potential evidence. Investigations would benefit from longer data retention;
- law enforcement agencies need more officers, tools and training to fight cybercrime;

- there is a need for a broader cooperation between public and private sectors to address new digital threats;
- law enforcement agencies should be firmly embedded within the cybersecurity crisis management frameworks.

The fight against violent and organized crime must be robust, but above all must use analytical capabilities, crime investigation, intelligence and information systems, acknowledging socio-cultural problems, and respecting human rights.

The collaboration between the Police and a myriad of public and private entities is essential to maintain sustainable partnerships, to build bridges with minority communities and to discourage some of its members from embarking on the path of radicalization, terrorism (Forst, 2014, 634) and organized crime.

Militarization of law enforcement has the potential to undermine citizen's reliance in justice and police, because exceptionalism conveys to the community that if you transgress, you may encounter extreme, possibly deadly violence. Such perception of deterrence is unacceptable in a rule of law society.

Police must have special units to deal with serious crime: SWAT teams, public order units, bomb squads, canine units. However, robust policing strategies and

militarization of Police departments shouldn't be "the solution". Police must know and understand the community and to analyze crimes that impact in local security to take preventive and repressive measures. Police need to recruit data scientists, financial experts, digital forensics, digital patrollers to face the cyber organised crime.

The disinvestment in human sources and the prioritization of technological solutions can create an aseptic perspective of reality, the inability to detect underground criminal phenomena and increase bias in police intelligence analyses.

New technologies may also pose significant challenges related to their questionable reliability and accuracy that lead to multiple risks to civil rights, discrimination, data protection, privacy, and unlawful profiling.

However, these emergent technologies have already an important role in modern policing, helping investigators, analysts, and regular policing to analyze large amounts of data, helping to detect suspects in video surveillance systems, facilitating the collection of (online) evidence in complex investigations, and detecting criminal networks and operations on the internet. But, at its core, law enforcement requires partnerships with communities, the same sense of duty and sacrifice, and the same integrity and respect for fundamental rights it always has.

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