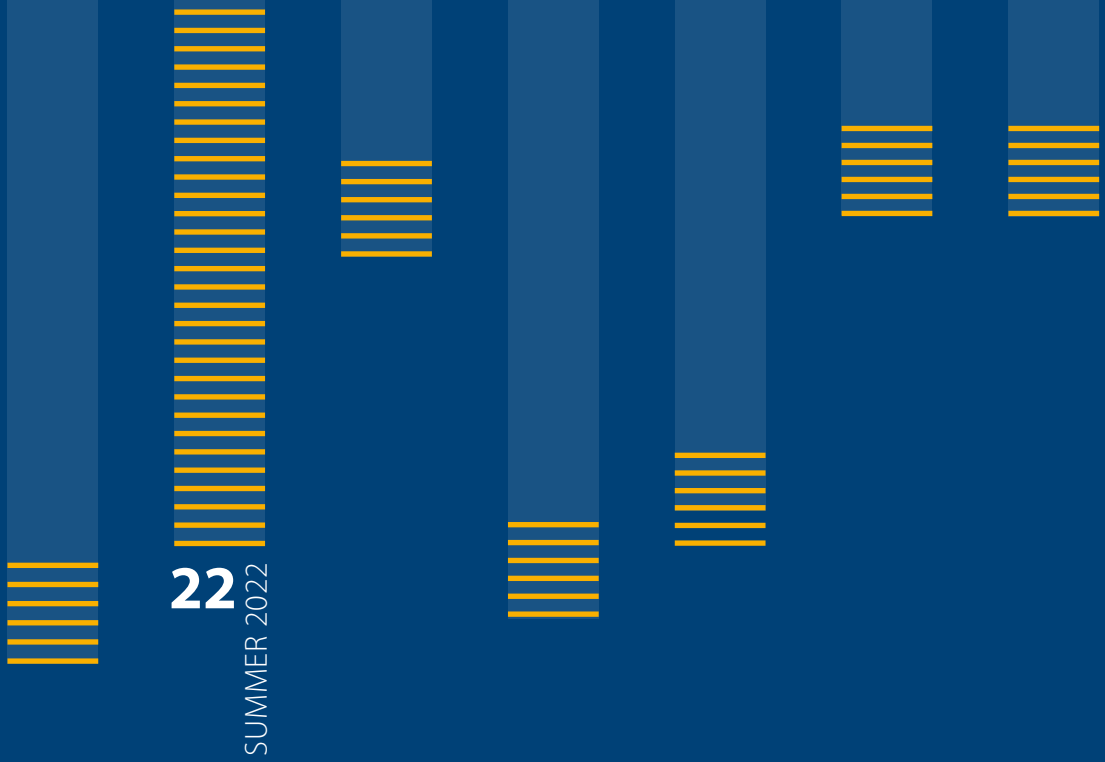

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Executive Director's Prologue

Montserrat Marín López
Executive Director

Dear Readers,

It is with great pleasure that I address you, as the Executive Director of CEPOL, for the release of the 22nd issue of the European Law Enforcement Research Bulletin. The content of this edition came together in 2022, a pivotal year in the life of our agency. When I took up my duties in February 2022, I felt tremendously honoured that the agency's Management Board appointed me to lead CEPOL in the upcoming years, and this feeling is only getting stronger.

As the agency navigates a fast-changing multifaceted environment, it has become all the more clear that the linear evolution of CEPOL is reaching a turning point. High stakeholder expectations, notably within the EU, make the recalibration of CEPOL's strategic outlook inevitable.

Before I elaborate on the highlights of our reimagined vision for the future, I would like to dedicate a few words on the approach adopted to develop our agency's new strategy 2023-2027.

Participation and inclusiveness have been key. My intention throughout the development of the strategy has been to apply a bottom-up approach, thus ensuring that staff members of CEPOL participated actively in the overall process. The resulting document builds as well on the outcomes of an independent evaluation that addresses the objectives of CEPOL as per the mandate given in 2015 and on the recommendations made by our Management Board. I am proud to share with you in this forum that our strategy was adopted during the 9th Management Board Meeting that took place in Prague on 22-23 November 2022.

Allow me now to present you some important aspects of our new strategy and explain **how research is reflected** in our immediate future.

With this new strategy, CEPOL sets out the pathway to become the **EU Hub for law enforcement training** and provide a concerted and systematic EU approach to training. The agency will continue to foster a common EU law enforcement culture and promote the accreditation of law enforcement vocational training. In order to achieve these goals, CEPOL will also dedicate efforts to optimise processes, workflows and resources and ensure that appropriate infrastructures are in place, thus maximising its contribution to a robust and strong EU security ecosystem.

We want to provide EU Member States with the latest **innovation and research developments** in the field of law enforcement training, building on relevant outcomes of national and EU-level security research programmes. The integration of research outcomes into innovative training will be part of CEPOL's efforts to directly increase its impact and efficiency. For this purpose, CEPOL will also leverage its membership in the EU Innovation Hub for Internal Security ([1]), to monitor and coordinate research and innovation developments and structurally ensure a direct correlation between these and law enforcement training with an extended organisational capacity.

I am confident that CEPOL will deliver on its promise to become a hub of knowledge sharing and exchange at EU level for the law enforcement community.

When it comes to the **cooperation with universities**, we have been positively observing that academia and Law Enforcement Agencies (LEAs) are increasingly aligned in their ambitions. In accordance with the EU recommendations related to the need for an evidence-based action, LEAs more and more often formalise collaboration with universities in the areas of curriculum development, teaching and learning, research, development and consultancy.

The benefits are numerous and include the enhancement of research and innovation through joint research projects related to security, the delivery of innovative products for testing by LEAs, as well as improvements in teaching, learning, and provision of new streams of funding to law enforcement training institutions.

Likewise, CEPOL aims to establish an active relationship with academic institutions and researchers with the goal of enhancing its training portfolio. In this regard, CEPOL also aspires to become actively involved in real research activities, particularly those whose results can be applied for the improvement of our training offer to increase its effectiveness and attractiveness.

([1]) https://www.europol.europa.eu/operations-services-innovation/innovation-lab/eu-innovation-hub-for-internal-security

A lot of work has been delivered to reach this point, and a lot of work still awaits us in the future.

I could not conclude my words without expressing my gratitude to the editor-in-chief of the European Law Enforcement Research Bulletin, Dr. Detlef Nogala, an accomplished researcher with a deep knowledge of his area of expertise. With this issue of the *Bulletin*, we bid farewell to our long-standing colleague at CEPOL. We have been extremely fortunate to have him with us in this capacity from the very first edition of this academic publication, back in 2009.

Since then, under his care, the *Bulletin* has gone through a remarkable evolution. Dr. Nogala, with his enthusiasm and leadership, helped this publication become what it is today. Thank you, Dr. Nogala! You have left a mark on its purpose which remains unchanged: to provide a forum where experts across Europe and beyond can keep each other informed on a regular basis about law enforcement research projects and matters related to police science.

By the same token, I would like to take this opportunity to ensure the readers that CEPOL will continue the valued established practice and is looking forward to the next Bulletin edition.

Finally, I am grateful to you, dear readers, for your continued support and confidence in our work, and I hope that you will enjoy our latest issue of our CEPOL *Bulletin*.

Montserrat Marín López

Executive Director CEPOL

„Disseminating Research Findings“ – An interim review of the European Police Science & / Law Enforcement / Research Bulletin

When CEPOL was first established in 2001 as the “European Police College”, its mandate included the “dissemination of research results and good practices” as one of the new organisation’s tasks. This task was based on the firm conviction of the initiators that the training of senior police officers with a view to improving cross-border cooperation at the European level could not do without a concrete intake of scientific knowledge and research results - not least if the larger objective looming on the horizon was already to aim at the creation of a common “European law enforcement culture”. The use of scientific studies, whether internal or external, for the training or education of higher ranks had already become common practice in some, but by no means all, national police training systems. Studies and research on various police and policing topics existed, mainly in the Anglo-American area, but as police structures had essentially grown as national architectures, the creation and dissemination of relevant scientific police knowledge developed mostly within traditional or linguistic boundaries. The creation of a European pool of scientific police knowledge, not only for practical training purposes, but also as a solid basis for the promotion of a common police culture of a European nature, would require some special efforts and initiatives (Honkonen 2011, Fehérváry 2007; 2011; 2016).

On the initiative of the “Training and Research Committee”, the CEPOL Management Board approved in 2008 the launch of the “European Police Science and Research Bulletin” as an open-source publication with the aim of becoming a forum for scientific exchange and discourse between university academics, trainers and police practitioners with a European focus. At that time, a number of well-established, mainly English-language, quality journals were available on the market. However, the lively exchange within the CEPOL network showed that there was a lack of an easily accessible outlet for academic and scientific work at the professional interface of policing, law enforcement, training and education at the European level. Moreover, there was a strong belief that bringing together and eventually consolidating individual expertise and the various national knowledge

resources in this area would not only promote better understanding and preparation for cross-border cooperation, but could also be a cornerstone of an emerging new 'European Police Science'.

The ambition was as high-flying as the premises of realisation and production were pretty modest – a setting not unfamiliar for researchers and scientists. The first articles were based on a call directed to the affiliates of the CEPOL-network in the Member States and the early issues were rather of a makeshift kind, produced with little internal resources. Nevertheless, the response to the publication of the early issues was encouraging and the next step towards a more professional approach to production was taken, when the Publication Office of the EU Commission became a partner from issue Nr. 8 onwards. Reflecting the change in the Agency`s mandate in 2016, widening the target groups from police to a larger law enforcement community (including border guards, tax officers, prosecutors), the Bulletin was renamed and relaunched as the "European Law Enforcement Research Bulletin".

Two years ago, the 20th (regular) issue of the Bulletin appeared and we were able to share with our readership in the editorial introduction a chart showing the multinational and truly European congregation of authors contributing to the growth of the journal towards international professional standards. With some changes in the Bulletin's editorship in sight, it might be a good moment to take another analytical look at what has been achieved so far.

Evolution and Highlights of the Publication

From the first issue launched in 2009 to date, in sum 27 issues of the Bulletin have been completed and published – twenty-two regular ones and five Special Conference Editions (Nr. 6 of the latter is about to be launched). At the beginning a real "push and drag" effort (gently pushing authors to submit a paper and dragging them to delivery of the final version), the journal has taken in the meanwhile its place in the global market as a recognised international open-access publication, indexed in Google Scholar, Hein Online and EBSCO, while articles are regularly cited and referenced in other scientific publications worldwide. Including the current issue and the forthcoming Special Conference Edition Nr. 6, over 400 articles and contributions will have been released in all hitherto published issues of the Bulletin, all of which are accessible online free-of-charge to the general public. It is perhaps a sufficient number to allow an excursion into some statistical accumulations produced by the statistical feature of the Open-Journal-System, the platform on which the Bulletin has been running since 2014.

In total up, to 15th December 2022[1], the system recorded 121.768 "Abstract Views" and 98.312 Downloads of the full text as a PDF-file. The arithmetic mean for the mode of access to a published article is 356 and 287 respectively.

Table 1. Overall electronic access

	Abstract Views	PDF-Download
Total Count	**121.768**	**98.312**
Numerical average per article	356	287

At first glance, this looks like good news, since the figures imply that the Bulletin is serving its purpose - at least on a formal level: the contributions seem to meet the demand of a potential readership. From a strictly mathematical point of view, we could imagine a full auditorium of readers for each article.

The informed reader will, of course, be aware that, like all statistics, the figures given are only indications of the actual actions and effects of what real people – or computerised algorithms – do with the articles. The returns are not very sophisticated either: for each article the system only counts "Abstract Views" and "Total Gallery Views" – which is equivalent to downloading of the pdf-file of an article. It doesn't say whether it's a download robot or a human click, and we can only speculate whether a human has only glanced at an entry or taken the time and leisure to read either the abstract or the full article properly.

As the leading international publishing houses do with their hosted journal-websites, we can still derive some information about the resonance and impact of our publication in the real world, by looking at the "*most read*" or "*most cited*" papers.

The first list of analytical interest is the ranking of articles, whose abstracts have been viewed – according to the system - more than 1000 times. The assumption here is that these abstract views are driven by the curiosity of real humans, trying to explore the relevance of the contribution for their real interest.

1 The figures given reflect the counts for the electronic versions of Bulletins Nr. 1-21 and Special Conference Editions (SCE) Nr. 1-5 only, usage of distributed printed copies is beyond accessible knowledge.

Table 2. TOP-14 Articles with Abstract Views (>1000)

Article Title	Issue	Abstract Views
Female Leaders in a Male Organisation	No 17 (2018)	4781
The Power of Dialogue in Public Integrity and Curriculum Development - (… in Hungary)	SCE No 3 (2017)	4140
The GODIAC Project	No 6 (2011)	2742
What about AI in Criminal Intelligence? From predictive policing to AI perspectives	No 16 (2017)	2401
Citizens' trust in the Police and Police Trust-Building Strategies	No 19 (2020)	1622
Interagency Cooperation	No 19 (2020)	1417
Social Media for Community Oriented Policing	No 19 (2020)	1397
Opening Up the Black Box: Understanding the Impact of Bodycams on Policing	SCE No 4 (2019)	1390
The Schengen Evaluation Mechanism: Exploring the Views of Experts (…)	No 18 (2019)	1352
Moped Enabled Mobile Phone Snatches	No 18 (2019)	1284
Technopoly and Policing Practice	SCE No 4 (2019)	1149
Investigative Strategy: the application of strategic principles to criminal investigations	No 16 (2017)	1144
Crime in the Age of Technology	SCE No 4 (2019)	1072
Illegal Trading in Endangered Animal and Plant Species from an Austrian Perspective	No 19 (2020)	1004

In view of the average number of abstract views for a Bulletin article given above, the first four entries are noteworthy: the highest interest, more than ten times the average, seems to be reserved for an intra-institutional 'gender issue' topic, followed by a topic related to community policing in a particular country. It is perhaps not too far-fetched to suggest that the attention is coming from quite different groups of readers. The article on the GODIAC project is about innovative approaches to protest policing, and any article on artificial intelligence has become a headline story in recent years. All in all, the Bulletin's front-runners attract readers' interest across a wide range of topics.

One might expect that reader interest would be closely correlated with the number of downloads of the full-text pdf of the article. However, the top list of article downloads tells a different story:

Table 3. TOP-12 Articles Downloaded > 1000

Article Title	Issue	PDF
Cyber-Policing: The role of the police in fighting cybercrime	SCE No 2 (2017)	7525
What About AI in Criminal Intelligence? From predictive policing to AI perspectives	No 16 (2017)	5318
Understanding Distance Shooting and the Type of Firearm from the Analysis of Gunshot Sounds	No 15 (2016):	3099
Investigative Strategy: The application of strategic principles to criminal investigations	No 16 (2017):	1722
Writing Instruments Inks: microspectrophotometry forensic analysis and characterisation	No 16 (2017):	1682
Professionalising policing: seeking viable and sustainable approaches to police education and learning	SCE No 3 (2017)	1392
Opening Up the Black Box: Understanding the Impact of Bodycams on Policing	SCE No 4 (2019)	1381
The ePOOLICE Project: Environmental scanning against organised crime	No 16 (2017):	1348
Transformational, Transactional and Cooperative Police Leadership in Theory and Practice	No 14 (2016):	1127
Interpol's Evolving Approach to Innovation and Research-Based Policing	No 14 (2016):	1121
Sectoral Qualifications Framework for Border Guarding	No 3 (2017)	1049
Stress Management as a Part of Police Work	No 15 (2016):	1000

Comparing both lists, we find some counter-intuitive peculiarities:

- the article with the highest download figure of all, tackling the paramount cyber-crime-theme does not appear in top article-view ranking at all;
- conversely, the first three abstract-views do not mirror in the top download-list;
- in fact, only three titles (on AI, bodycams and investigative strategies) feature in both lists.

This unexpected finding of a noticeable mismatch between abstract views and download figures is fuelled by looking at the most striking divergent ratios between both ranked categories:

Article Title	Delta
The power of dialogue in public integrity and curriculum development	36-fold
Understanding Distance Shooting and the Type of Firearm from …	17-fold
Female Leaders in a Male Organisation	15-fold
Cyber-Policing: The role of the police in fighting cybercrime	14-fold
Research Methodology Applied to Teaching in the Spanish Guardia Civil	11-fold

While four top titles appear on both lists, for around 5% of the entirety of articles the "mismatch" is more than twofold in one or the other direction. Given the limited statistical capabilities of our technical platform, we can only speculate about the reasons for the significant discrepancy in the figures for a small set of articles. Assuming that "Abstract Views" are triggered by the action of people simply scanning for relevant content, and "PDF-downloads" indicate a confirmed closer interest in the content, one is tempted to identify a functional difference between "***attraction***" and "***engagement***" when readers search for scientific literature. No less plausible is the suggestion that disproportionately high file-downloads are the effect of web-robots, harvesting internet-material controlled by key-words – "cybercrime", "artificial intelligence" and "firearms" probably featuring high on the list.

For a publication such as the Bulletin, what is probably more important than technical access figures is the potential impact on readership and scholarly dialogue in the field. Citations to published articles are often taken as an indicator of the overall impact of a journal in the scientific community. Again, given the technical limitations of our platform, Google Scholar is our only source of investigation here.

Table 3. Top-10 Cited Articles

Article Title	Issue	Citations*
Putting learning into practice: Self reflections from cops	SCE No 3 (2017)	22
What about AI in Criminal Intelligence? From predictive policing to AI perspectives	No 16 (2017)	21
Sectoral Qualifications Framework for Border Guarding	No 3 (2017)	17
Professionalising policing: seeking viable and sustainable approaches to police education and learning	SCE No 3 (2017)	16
Interagency Cooperation – Building Capacity to Manage Domestic Abuse	No 19 (2020)	9
Opening Up the Black Box: Understanding the Impact of Bodycams on Policing	SCE No 4 (2019)	9
Transformational, Transactional and Cooperative Police Leadership in Theory and Practice	No 14 (2016)	9
Social Media for Community Oriented Policing	No 19 (2020)	6
Cyber-Policing: The role of the police in fighting cybercrime	SCE No 2 (2017)	6
Female Leaders in a Male Organisation	No 17 (2018)	4

Apart from the reassurance that the articles published in the Bulletin actually are read and increasingly cited in other academic publications, there is another surprise in this listing, as at the top we find an article on professional self-reflection and learning, which interestingly does not rank high among either article views or download numbers. It might be a bit overstretching the numbers and the limit data body, but there is a temptation

to add "***inspiration***" as one of the functional effects of publishing the European Law Enforcement Research Bulletin.

About issue Nr. 22

This issue, due to organisational reasons a bit delayed as the 2022' summer edition, makes up for it with a wide range of relevant and insightful contributions.

Since a few issues ago we have started to identify the type of contribution in the Bulletin. For example, whether it is a previously unpublished empirical paper, the written version of a conference presentation or an essay for discussion.

Such a classification according to the type of article can rarely be combined with a thematic link between the texts and the authors' perspectives. However, it is precisely this kind of linkage an editor is interested in, as it highligts the immense range and interconnectedness of police problems and activities.

A thread running through the articles in this issue begins in the technological realm with an empirical exploration of emerging organisational requirements for open-source intelligence in the age of artificial intelligence by **Bayerl, Akhgar, Raven, Gibson & Day**, as well as an inventory of the challenges that fifth generation mobile technology poses for law enforcement work, which is the result of a senior officer course at the **Guardia di Finanza**. The appropriate design of critical communication infrastructures is the subject of a study by a Finnish research group (**Salmela, Aaltola, Toivonen & Lehtinen**), which highlights the central importance of the category of resilience, especially in crisis contexts such as the COVID-19 pandemic.

The still reverberating effects of the pandemic are the focal subject of another group of contributions which, look at the specific policing problems and responses of countries such as Malta (**Muscat & Laudi**) and Portugal (**Romano, Soeiro & Olivera**), and the complex intra-organisational side-effects of the extraordinary health-crisis, as illustrated by a study of the police force in Saxony, Germany (**Meisselbach, Melcher, Schöne & Thieme**).

The additional tasks faced by police forces in Europe have not made it any easier to control long-term problems such as the spread of organised crime, as **Gil Valero** points out using the example of the Western Balkans. Moreover, to remain in this part of the continent, there are persistent inter-organisational weaknesses in corruption, which undermine the police's ability to act, as the paper of **Stergioulis** argues for the case of Greece.

Given the increasing effort and burden of ensuring public safety, it is not surprising that authorities in some place are looking for new ways to organise support from civilian resources. **Pepper & Rogers** present an example of the involvement of volunteers in policing from England and Wales, identifying not only a social but also economic benefits. However, the contribution from Germany by **Koerner & Staller** underlines the specific risk and therefore the need for special preparation for police work in public spaces, which could set strict limits to the suggested approach of volunteering.

Two contributions then lead back thematically to the technology-driven field presented at the beginning, but these deal with the well-known, almost 'old-fashioned' problems of police issues which come with individual car traffic: **Amaraxi & Kokkinos** examine the evolution of road collisions in Cyprus over a period of 22 years, while **Cestra & Zaniboni** call for tacking on the complex nexus of crime and road traffic on a European institutional level.

The twelve articles in this 22nd issue deal with a range of traditional, crisis-related and technology-driven emerging policing issues in a predominantly European perspective, partly using empirical scientific methodology. In this sense, the Bulletin will try to continue to contribute to the further development of knowledge and practices of progressive and effective policing for the benefit of European citizens (see for context and more details del Barrio Romero et al., 2009).

This endeavour however would be inconceivable without the investment and dedication of the Bulletin's reviewers as well as its members of the Editorial Board. We would therefore kindly ask the readership to take note of the **list of our reviewers** from the last five years in this issue. In a similar sense, we would like to draw attention to the availability of the 5th Special Conference Edition covering contributions to the 2021 online edition of the CEPOL Research & Science Conference on "Pandemic Effects on Law Enforcement Training and Practice", as well as to the online-first published articles of forthcoming issue Nr. 6 titled "Preparing Law Enforcement for the Digital Age".

Dr. Detlef Nogala

Managing Editor

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An Appreciation to the Reviewers of Manuscripts (2017-2022)

All papers submitted to the journal are subject to internal or external peer review processes, entrusted either to external experts, guest-editors in case of the conference editions, or to the members of the editorial board. Without their expertise and commitment, such a publication in the service of science and the law enforcement community in Europe and elsewhere would not be feasible.

On behalf of the European Agency for Law Enforcement Training (CEPOL) the Editorial Team would like to thank the following individuals who provided reviews **in the period 2017-2022** for their invested time and commitment (in alphabetical order):

- Mercedes Abdalla (Europol)
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- Roddrick Colvin (U.S.A.)
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- Zágon Csaba (Hungary)
- Nelson da Cruz (Portugal)
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- Stefan Kersting (Germany)

ORIGINAL RESEARCH ARTICLES

Future Challenges and Requirements for Open Source Intelligence in Law Enforcement Investigations:
Results from a horizon scanning exercise

Petra Saskia Bayerl
Babak Akhgar
Alice Raven
Helen Gibson
Tony Day
CENTRIC, Sheffield Hallam University

Abstract
Open Source Intelligence (OSINT) is a well-established, time- and resource-efficient method in modern-day policing. At the same time, OSINT is not immune from technological, legal and societal developments that affect the ways and contexts in which it operates. This paper examines the key challenges and requirements that OSINT as a policing capability needs to address to remain viable long-term. The results are based on a horizon scanning exercise conducted with operationally active OSINT-investigators across eight countries. Findings identify core application areas, new capabilities and essential innovations. Results further define the organisational, ethical and legal requirements enabling the integration of Artificial Intelligence into OSINT-investigations as well as the handling of 'bad actors' and citizens' increasing privacy concerns. Collectively, the results provide vital guidance for police organisations and policy makers for future investments into OSINT-tools and practices.

Keywords: *Open Source Intelligence (OSINT), police investigations, Artificial Intelligence, organisational recommendations, horizon scanning*

Introduction[1]

Open Source Intelligence (OSINT) is a well-established method to acquire actionable intelligence for law enforcement agencies' investigations. As an important element of intelligence-led policing it can support law enforcement agencies in the prevention and identification of crimes (e.g., Capellan & Lewandowski, 2019; Hayes & Cappa, 2018), assist digital forensics (Quick & Choo, 2018) and critically enhance situational awareness (Akhgar & Wells, 2018). Although some debate exists whether OSINT can in fact be classified as 'intelligence' (Miller, 2018), OSINT's ability to find new or validate existing information makes it a valuable, time-effective and resource-efficient method for modern-day policing (Staniforth, 2016).

At the same time, OSINT investigations are continuously exposed to changes in its technical and societal environment. This requires a re-assessment of where OSINT as a discipline has innovation needs as well as an investigation of upcoming challenges that need to be addressed on an operational, organisational and policy level. This paper highlights the upcoming challenges and requirements to enable the formulation of practical and strategic guidance for OSINT-professionals, police organisations as well as policy makers on concrete operational challenges as well as future directions and investments. Valuable insights have been gained from literature reviews (e.g., Evangelista *et al.*, 2021; Ungureanu, 2021). Our approach is the exploration of expert perspectives by OSINT-investigators, which offer unique insights into the operational realities and complexities as well as the organisational and policy requirements for future investments into OSINT-tools and practices.

OSINT in Law Enforcement Investigations

OSINT is characterised by three aspects: "1) [it] consists of data collected from 'publicly available sources', 2) it is data to be used in an 'intelligence context', and 3) the data collection can be performed in an overt manner" (Akhgar & Wells, 2018, p. 68). OSINT possesses several desirable features for LEAs. It is a highly flexible technique that can support the full investigative cycle from first indications of criminal behaviour to presenting supporting evidence in court (Sampson, 2016). Social network information, for instance, can assist in the identification of radicalisation and terrorist activities (Cohen, 2014; critically: Lane *et al.*, 2018), provide vital situational awareness for the assessment of threats or during protests and crises (Capellan & Lewandowski, 2019; Stern, 2017) or alert of developing community tensions (Waddington, 2019). Further, OSINT-data can validate and enrich the operational picture (MoD, 2011; Staniforth, 2016) as well as corroborate information obtained through other means such as closed and protected sources, which can safeguard them from being revealed in court (Wells & Gibson, 2017). OSINT, moreover, is a relatively low-risk ac-

1 Our research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

tivity compared to physical deployments, which considerably reduces the dangers and resources needed for intelligence work (Akhgar & Wells, 2018; Hassan, 2019). According to some estimates, OSINT underlies up to 90% of available and relevant intelligence in police investigations (Hill, 2018).

Developing Challenges: AI, societal reactions, malicious actors

OSINT-investigations face a number of challenges, some of them well known and inherent in the discipline, some of them emerging more recently. To the former belong questions about reliability and validity as crucial aspects of OSINT-practices, as OSINT-activities are generally characterised by a high degree of access to data but an often low (or unknown) degree of trustworthiness (Gottschalk, 2009). Big data crawling and social media API harvesting tools, for instance, are able to perform mass data collection, yet often offer only limited measures to refine the volume of data returned (Whitler, 2018). This means that whilst OSINT-tools have the capacity to gather vast volumes of data, the data can contain a significant amount of noise from irrelevant information which can raise concerns around collateral intrusion and the proportionality of the investigation (Sheptycki, 2004).

OSINT-investigations are further exposed to new, fundamental changes in its technical and societal environment. For instance, LEAs have begun to employ Artificial Intelligence (AI) in a drive to increase the efficiency of data processing and decision-making (cp. Evangelista *et al.*, 2021). In future, OSINT may thus increasingly be supported by (semi-) automatic collection and analysis capabilities (Pastor-Galindo *et al.*, 2020). This means, OSINT-investigators can expect to obtain increasingly diverse data and more powerful technologies to enhance the capturing and scrutiny of large, diverse data streams, challenging the notion of what 'open data' refers to (e.g., newer data sources such as smart sensors, gaming platforms, Internet of Things devices, etc. which promise additional avenues to obtain more and disparate types of OSINT).

From a societal perspective, OSINT shares traditional intelligence challenges, in that it maintains "a suggestion of subterfuge, as clandestine and covert activity conducted by officers of a shady disposition involving a degree of moral ambiguity" (Ratcliffe, 2008, p. 263). Well-publicised events such as the 2018 Facebook-Cambridge Analytica or the more recent NSO Pegasus-Software scandals only exacerbate such concerns. They dramatically sharpen public perceptions about data privacy, leading to calls for moderation in police surveillance powers and stricter rules for the private sector such as social media giants (Sanders & Patterson, 2019; Wong, 2019). Public privacy awareness and the subsequent increase in privacy consciousness can complicate the availability of (reliable) open source information; not only because people move to closed and (better) encrypted services or consciously aim to avoid surveillance (e.g., Bayerl & Akhgar, 2015; Makin & Ireland, 2020), but also because data access has been greatly reduced by platform providers. For in-

stance, Twitter's policy regards 'surveillance' as a breach of usage conditions,[2] while Facebook has limited the possibility to view the information of 'unfriended' users and graph search functionalities which allowed complex search terms across users (Shu, 2019). In combination, these movements alter the quantity and quality of open-source information available to OSINT-investigators (Walden, 2018).

Compounding these challenges are observations that malicious actors are using OSINT-techniques for their own aims (Appel, 2011). The UK Financial Conduct Authority (2018), for instance, highlighted the dangers of OSINT-use by criminals for phishing attacks, whilst notorious trolling groups such as 4chan employ OSINT-techniques to harass, bully and intimidate other websites and personal accounts (Bonser, 2019). The same techniques are also used against LEAs. Knowledge about OSINT-techniques by 'malicious actors' do not render the method useless of course, but certainly means that LEAs' OSINT-process needs adaptations and safeguards.

Together these developments alter the playing field for OSINT-investigations. This observation motivated our investigation into how OSINT as a professional practice and the organisations using OSINT need to adapt. More precisely our investigation aims to explore the nature of trends as well as what these trends mean for OSINT-practitioners and how to adjust them going forward on operational, organisational and policy levels.

Methodology

Sample

To understand upcoming challenges and innovation requirements, we conducted a horizon scanning exercise with 31 active OSINT investigators (61.3% men, 38.7% women, June 2019). The experts stemmed from twelve organisations in eight countries (Belgium, Germany and US representing 8.7% of participants each; Italy, Romania and Spain representing 4.3% of participants each; UK representing 39.1% and Netherlands representing 17.4% of participants) operating on local (43.5%), national (34.8%) and international levels (17.4%). They were recruited as participants in a three-day expert workshop hosted by the authors' research group and conducted under the umbrella of a law enforcement organisation. Participants represented disparate areas of OSINT-work (counter-terrorism, human trafficking, financial crime, smuggling, support of central and local police investigations). The workshop's objective was the demonstration of and training for emerging OSINT-techniques using classified material on real-life cases and investigation techniques. The selection of participants into the workshop was restricted to serving police officers who use OSINT actively and consistently in their professional capacity. This stringent se-

2 Cp. developer.twitter.com/en/developer-terms/agreement-and-policy.html

lection ensured that participants had extensive professional experience, area knowledge and insights into developments, trends and challenges of OSINT-use in police investigations. The authors participated in this workshop as non-police (scientific) observers and moderators (details see below).

Data collection

A vital part of the workshop was a horizon scanning exercise to gather future OSINT requirements, trends and challenges. The exercise used an exploratory, concurrent mixed-method approach (Creswell & Plano Clark, 2011) combining quantitative data collection by survey and qualitative data collection by focus group. The survey captured four main areas:

1. *Areas for which OSINT be most relevant in the next two years:* Ranking of 11 pre-defined areas from 'most' to 'least relevant' with the option to add additional areas.
2. *Most important technical capabilities for OSINT-investigators in two years:* Raking of 13 pre-defined capabilities from 'most' to 'least important' with the option to add additional capabilities.
3. *'Next big' innovation for OSINT – given money and resources are unlimited:* This question used an open-ended format to allow unrestricted collection of ideas.
4. *Role of technologies for OSINT in the future:* Participants were asked to provide their perception on 1) predictive modelling, 2) Artificial Intelligence, 3) Internet of Things, 4) big data analytics and 5) face recognition on a Likert-scale from '1:no role at all' to '4:a very big role'.
5. *Impact of people moving to 'less open platforms' for the feasibility of OSINT-investigations:* Rated from '1: no impact at all' to '4: very high impact'.
6. *Concern about 'bad actors' exploiting OSINT capabilities:* Rated from '1:not at all concerned' to '4:very much concerned'.

Instructions to participants emphasised that answers were collected anonymously without requesting personal information about individuals or organisations to remove barriers for participation. Three people declined participation, while one person had to leave before the survey was handed out, which led to 27 completed surveys.

For in-depth qualitative insights, we further conducted three focus-groups including all 31 participants. The overall group was split into three sub-groups (allowing self-selection), each of which was moderated by one of the authors. Each focus group discussed one of three topics: (1) the role of predictive analytics and AI for OSINT, (2) the increasing use of closed networks/technologies for investigators' OSINT work, and (3) dealing with the use of OSINT by bad actors. After 30 minutes, each sub-group presented a summary of their discussion to the full plenum. In a second round, each sub-group took on one of the other questions, including a reflection on the summary of the previous debate. After

30 minutes, the sub-groups again summarised their results for the plenum. This process resulted in six focus-group discussions, two for each question, including a reflection of previous results. The three moderators took detailed notes during both rounds of discussions and the two plenum sessions which formed the basis for analysis.

Data analysis and validation

Survey information was analysed using the software package R. Next to descriptive statistics (mean ranks and top rankings), multidimensional preference scaling was used to determine similarities across ranking profiles (Lee & Yu, 2013) using the R package *pmr* (specialist package for ranking data analysis; Lee & Yu, 2015). Answers to the open questions were analysed in NVivo using thematic coding (Gibbs, 2007). Thematic coding was also used for the detailed notes taken during the focus-group discussions and summaries. Open codes from the first round of coding were reviewed and grouped into higher-order themes in a second round of analysis leading to overarching categories describing (e.g., 'challenges of AI', 'mitigation strategies' for dealing with bad actors, 'adaptations' required to handle privacy-driven changes in online behaviours). The qualitative findings were used to explain, extend and detail quantitative results. An external validation of findings was conducted by a senior police officer with a national remit for security, who had not been part of the original participants (October 2019). This person confirmed our results as well as their relevance for informing the future strategic direction of OSINT in policing.

Results

Future application areas and capabilities

OSINT-experts in our group had very decided views about the areas for which OSINT will be most relevant over the coming years: across all 11 areas *counter-terrorism* (CT) and *child-sexual exploitation* (CSE) achieved the highest average ratings (indicated by lowest mean ranks in Table 1; ranked by 63% of participants in top-3 future areas). Next came *serious and organised crime* (SOC; ranked by 41% in top-3), *trafficking in human beings* (THB) and *frontline policing* (both ranked by 33% in top-3). As least relevant (highest mean ranks in Table 1) emerged OSINT-use for *community policing, money laundering* and *fraud*. Only two experts added further areas addressing *riots* and *counterfeiting*.

We conducted multidimensional preference scaling (MPS) to investigate the underlying logic of these ranking decisions, positioning experts' preference rankings along two dimensions.[3]

3 The objective of multidimensional preference scaling is to cluster responses according to their similarity and represent the degree of similarity along dimensions in space. Respondents that rank objects in fundamentally different ways will be placed at opposite sides, while respondents that rank objects in similar ways will be placed close together. In this way, multidimensional preference scaling provides insights into the underlying structure of ranking data within a group of respondents.

The first dimension suggests that experts differentiate areas according to their impact as either *low versus high visual impact*[4] – with *CT*, *SOC* and *CSE* positioned at the high end and *CP*, *frontline policing*, *fraud* and *money laundering* on the lower end of the dimension. The second dimension seems to differentiate whether the nature of OSINT-investigations is mostly *reactive* – i.e., triggered by specific events such as *fraud*, *drug trafficking* or *money laundering* – or *proactive/preventive* such as in *community* and *frontline policing*.

Table 1. Mean ranks and number of top/bottom ratings across all 11 areas

Area	Mean rank	# of times in top-3 (% of answers)	# of times in bottom-3 (% of answers)	# of times in top half (ranks 1-5) (% of answers)	# of times in bottom half (ranks 6-11) (% of answers)
Counter-terrorism (CT)	3.00	17 (63%)	1 (4%)	24 (89%)	3 (11%)
Child-sexual exploitation (CSE)	3.74	17 (63%)	2 (7%)	20 (74%)	7 (25%)
Serious organised crime (SOC)	4.22	11 (41%)	2 (7%)	19 (70%)	8 (30%)
Trafficking in human beings (THB)	5.41	9 (33%)	6 (22%)	15 (55.5%)	12 (44%)
Frontline policing (FP)	6.07	9 (33%)	10 (37%)	14 (52%)	13 (48%)
Cybercrime (CC)	6.93	3 (11%)	8 (30%)	8 (30%)	19 (70%)
Illegal migration (IM)	6.81	5 (18.5%)	7 (26%)	8 (30%)	19 (70%)
Drug trafficking (DT)	7.33	1 (4%)	9 (33%)	6 (22%)	21 (78%)
Community policing (CP)	7.37	6 (22%)	14 (52%)	9 (33%)	21 (78%)
Money laundering (ML)	7.37	1 (4%)	10 (37%)	6 (22%)	18 (67%)
Fraud (FR)	7.74	2 (7%)	12 (44%)	6 (22%)	21 (78%)

Ranking reaching from 1: most relevant to 11: least relevant.

CT and *SOC* are at the neutral point of this dimension, probably because such OSINT-investigations tend to require both approaches. *CSE* emerged as somewhat of an anomaly as it appears at the proactive/preventive side of the dimension. A possible explanation is that CSE-cases generally require longer-term strategies and resources to effectively unearth the underlying criminal structures. Whilst the expert rankings indicate that OSINT will be most relevant for areas with high visible impact, some experts foresaw preventive OSINT-use and areas of lower visible impact such as *frontline policing* and *CP*. One expert

4 We use 'visual impact' instead of 'impact' since the actual ('objective') impact of these crimes is difficult to quantify.

explicitly mentioned '*OSINT for frontline officers*' in the survey's open question, thus broadening its use beyond traditional application areas.

Table 2 presents experts' rankings for the most important capabilities for OSINT-investigators in the coming two years. Most experts agreed that *social media analysis* will remain one of the most important capabilities in an investigator's arsenal (52% in top-3), followed by ensuring the *quality of intelligence* and *data visualisation* (both 41% in top-3). In contrast, handling *games*, *multilingual content* and support for *reporting* were seen as least important.

Table 2. Mean ranks and number of top/bottom ratings across all 13 OSINT capabilities

Capability	Mean rank	# Top-3 (% of answers)	# Bottom-3 (% of answers)	# Top half (ranks 1-5) (% of answers)	# Bottom half (ranks 6-11) (% of answers)
Social media analysis (SMA)	4.00	14 (52%)	0 (0%)	21 (78%)	6 (22%)
Quality of intelligence (QI)	4.96	11 (41%)	2 (7%)	16 (59%)	11 (41%)
Data visualisation (DV)	5.44	11 (41%)	1 (4%)	13 (48%)	14 (52%)
Data fusion (DF)	6.22	10 (37%)	4 (15%)	11 (41%)	16 (59%)
Dark-web analysis (DWA)	6.37	3 (11%)	2 (7%)	12 (44%)	15 (56%)
Compatibility w/ emerging social networks (CSN)	6.44	8 (30%)	6 (22%)	12 (44%)	15 (56%)
Mobile phones (MP)	6.48	7 (26%)	3 (11%)	11 (41%)	16 (59%)
Image processing (IP)	6.93	4 (15%)	3 (11%)	8 (30%)	19 (70%)
Analysis of chat rooms (ACR)	7.63	3 (11%)	6 (22%)	9 (33%)	18 (67%)
Covering own footprint (CFP)	7.78	3 (11%)	7 (26%)	9 (33%)	18 (67%)
Games (GMS)	8.70	4 (15%)	13 (48%)	7 (26%)	20 (74%)
Multilingual capabilities (MLC)	9.04	2 (7%)	13 (48%)	6 (22%)	21 (78%)
Reporting (REP)	10.48	0 (0%)	19 (70%)	1 (4%)	26 (96%)

Ranking reaching from 1: most important to 13: least important.

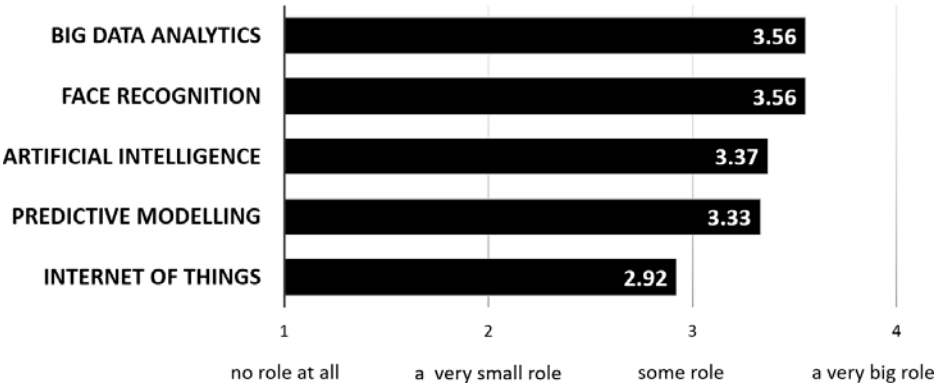
Overall, findings of our MPS-analysis suggest two disparate logics to explain disparities across ranking decisions. Firstly, experts seem to differentiate between *core* versus *supporting elements* in OSINT-investigations. Secondly, experts seem to differentiate between capabilities addressing the *OSINT-process* versus *potential data sources*. Perhaps unsurprisingly, capabilities supporting current core investigative activities such as *social media analysis*, *data visualisation, data fusion* and ensuring *quality of intelligence* were considered to remain relevant, more so than capabilities supporting *reporting* or the handling of *multilingual content*. The wide spread of profiles across core elements suggests, however,

that experts disagreed about the type of future capabilities to invest into. 37% focused on capabilities supporting the OSINT-process (*data fusion*, *visualisation*, enhancing *quality of intelligence*), while the majority (63%) indicated that the handling of disparate data sources will become most relevant. Next to investing in current core sources such as social media and images, *darkweb analysis* emerged as an important future capability, whilst one expert focused on the *analysis of chat rooms*. Interestingly, the handling of *game* content was seen as largely irrelevant, despite an increase in game-related criminal activities (Brewster, 2019).

Asked about the role of specific technologies in future OSINT-investigations, experts rated two technologies as highly relevant: *big data analytics* and *face recognition*. These were followed by *predictive modelling* and *Artificial Intelligence* (AI). We found the lowest relevance for *Internet of Things* (IoT), although it still was envisioned to play 'some role' in the future (Figure 1).

Figure 1. Average ratings for the future role of technologies for OSINT

In future, how big of a role will the following technologies play for OSINT?



Expectations for future capabilities

The quantitative results were mirrored in experts' answers to the 'wish-list' question in the survey, i.e., in their answers about the OSINT-innovations investigators would like to have. As the overview in Table 3 demonstrates, the majority of desired OSINT-innovations focuses on either the handling of additional data types and sources (e.g., 'blockchain analysis', 'darknet scraper', 'facial recognition tool') or on facilitating work across multiple platforms and data integration (e.g., 'centralised collection and data fusion', 'sharing of databases', 'platform-independent scraping'). Experts also require capabilities to make the investigation process more powerful, for instance, through automation or extra support for covert investigations such as 'total anonymity' or 'fake profile management'. In-

terestingly, experts rarely mentioned other aspects such as the groups who should use OSINT-techniques (two mentions) or organisational conditions (three mentions; e.g., 'professional LEA structures', 'senior management buy-in'). This suggests experts' preoccupation with the OSINT-process itself to the detriment of conditions that make OSINT-use successful within a broader environment. Still, focus-group discussions demonstrated that investigators are aware of organisational, legal and societal challenges surrounding LEAs' OSINT-use (see next section).

Table 3. Complete list of answers to open question about "what 'next big' innovation for OSINT would you wish you have"[5]

AUTOMATION	SUPPORT FOR COVERT INVESTIGATIONS
– Automated social media crawling – A red button in which you have an input (telephones, names...) and it gives you the most accurate result – Overview of most useful leads for manual OSINT	– Absolute online anonymity – Not just misattributed internet access, but the ability to choose a specific IP address, OS, web browser to the online host – Fake profile management, audit and development – Ability to access closed accounts/friends lists, etc.
HANDLING MULTIPLE PLATFORMS/DATA INTEGRATION	**CAPABILITIES FOR SPECIFIC DATA SOURCES**
– Centralised coordination/collation data fusion across platform – Capacity to record and capture on any platform to any evidential standard – The possibility to manage many profiles on different social platforms automatically populated with contents and credible information (for observation and covert operations) – Platform independent scraping and handling of the structured/unstructured data – Shared databases (secured) across/accessible to multiple jurisdictions – Single point of access to all management tools – emulators – A tool which gathers all databases available (phone numbers, emails, name, address, etc.), so that you can query on these items – Super-server where all the world's data come in and be categorised as a massive archive	– Big data analytics -> open source data on internet + police data + administrative data – Free & exhaustive blockchain analysis for Monero – Face recognition tool!!!; Face recognition tools (better & more reliable ones); Facial recognition software; Facial recognition capabilities* – Video recognition & detection; audio recognition – "Graph-search" functions working on Instagram, etc. – Functional social network analysis tool – Darknet - ongoing training and capabilities; Darknet scraper (Solis for all darknet/onion sites); Darknet - ongoing training and capabilities
MULTILINGUAL CONTENT	**GROUPS TO USE OSINT**
– Translation tool; Area/trustable translation solution	– OSINT for frontline officers – To allow victims to record their own OSINT in police database as evidence, e.g., hate crime

5 Number of answers does not add up to 27 as some experts provided more than one answer.

OTHER CAPABILITIES	ORGANISATIONAL CONDITIONS
– Offline plagiarism software – Effectively removing the "noise"	– Professionalised LEA structure, dedicated roles – Senior management understanding and buy-in – Tighter link between analysts and tech developers

* Answers from different experts with the same content were grouped together in one bullet point, separated by semicolons.

The role of Artificial Intelligence in OSINT-investigations

Given the frequently cited benefits of AI and predictive modelling for police work (e.g., McCarthy, 2019; Wulff, 2018), the (comparatively) low ratings for these two techniques seem surprising. The focus-group discussions revealed a somewhat ambiguous stance towards these technologies which may help explain the ratings. On the one hand, experts saw a clear potential for AI and predictive models to enhance OSINT-investigations by increasing efficiency through automation: AI may take over 'grind' work such as the automatic identification of indicators in social media content, accounts linked to the same person, removal of false positives and keeping accounts active to avoid their removal because of prolonged idleness. AI may further facilitate covert investigations utilizing automated web-scripts and bot-networks to collect large volumes of data through both reactionary (capturing data based on specific target activity) or proactive (continually capturing data in set time periods or based on user specified parameters) approaches. By automating 'menial tasks' OSINT-investigators should be able 'to handle many more investigations' than they are able today. The main future benefits of AI are seen as a 'force multiplier' by allowing police forces to increase efficiency and decrease workload.

However, experts were also vocal about challenges that limit the usefulness of AI for OSINT-investigations. Three types of challenges emerged:

a) *Technical and developmental challenges:*

- AI developers are believed to lack advanced knowledge of policing and more specifically insider knowledge about the processes and standards guiding the presentation of data and decisions in legal proceedings. AI applications therefore are often unable to produce evidence that is legally valid to be submitted to court. To help matters, experts requested a closer link between AI developers and OSINT-investigators starting during the preliminary stages of development (cp. Table 3).
- Participants claimed that research into AI innovations and algorithmic models cannot use real data from police investigations. Instead, development and testing rely on data specifically created for research and testing purposes (or 'fake data' in the words of our experts). They thus question whether AI applications and algorithms can be trusted for use in such a critical domain – and without trust in the data for AI-training and decision-making the results will not be trusted either.

- Severe events such as terrorist attacks are extremely rare which means there is very little data to train AI-models, thus jeopardizing their accuracy. Hence, participants see AI-support as inappropriate for OSINT-investigations concerning (very) rare threats.
- Experts further questioned whether social and psychological factors that influence criminal behaviours can be modelled with sufficient accuracy. Factors and relationships are deemed too complex for AI to capture and replicate realistically, particularly with current methods. The same is suggested for complexities inherent in language material as language detection and translation tools often struggle with specific dialects or concepts such as sarcasm. Experts were uncertain whether these issues can be resolved in the near future to a level adequate for police use.

b) *Procedural challenges:*

- Keeping predictive models up-to-date and relevant over time can be a challenge, as predictive models are often not updated fast enough to reflect changes in communication or behavioural trends (e.g., the use of specific hashtags is highly volatile; yet models often fail to remove/change such hashtags in a timely manner).
- Experts further observed that social media companies are becoming increasingly restrictive about accessing and harvesting their data, which creates constraints and negatively affects the feasibility of automating data collection using AI as such attempts may be blocked by platform providers.
- Some experts raised the possibility that reliance on AI can lead to the de-skilling of human analysts and investigators, threatening the expert basis of police work long-term.

c) *Ethical/legal challenges:*

- Given the often 'black box' nature of AI applications and models (i.e., lacking transparency of parameters and decision-making rules), experts questioned whether AI is able to create justifications that will be acceptable in courtrooms. They therefore want the OSINT-process to be overseen by human investigators with an understanding of AI-programming as well as knowledge in legal and ethical constraints.
- AI developments and deployments generally move faster than the discussions about their use in police forces and the development of legal and ethical frameworks. This creates consistent gaps between 'what is technically possible' and 'what is legal or ethical' which experts feared can lead to a legitimacy deficit in the perception of the public as well as legal challenges for LEAs.

For the above reasons, experts requested that the human analyst needs 'to be kept in the loop' stating that AI can never be 'a replacement' of human experts. In their view, human investigators accumulate experiences that create important intuitions or 'gut feelings' which 'sets humans apart' from AI-algorithms. Experts moreover suggested that in the

near future AI should be trained only to detect and/or remove generic content instead of training algorithms on domain-specific content. Also, AI should be restricted to the investigation of generic trends rather than specific cases.

Is the move to closed platforms an issue for OSINT-investigations?

Survey results indicate that experts are at least somewhat concerned about the development (m=3.30, sd=.54), which also acknowledged in focus groups in that experts proposed that behavioural changes may make their OSINT-work more difficult. Specifically, the distinction between overt and covert investigations can become dangerously blurred, when 'users move underground'. In consequence, OSINT-investigators may have to increasingly adopt covert techniques and therefore breach open source frameworks or pass investigations to other parts of the organisation to maintain legal and best practice standards. Although it will remain possible to collect intelligence, the quantity and detail of information collected through OSINT may thus decrease. Conversely, experts pointed out that with new platforms also new opportunities emerge to enhance investigations. LEAs should thus increase their presence on new platforms and investigators remain informed of developments to avoid 'playing catch-up', whilst ensuring not to neglect older media (e.g., Facebook).

Some experts also saw considerable 'scaremongering' in the public discussion around privacy which make new platforms appear more encrypted and secure than they really are. Most experts agreed that typical human characteristics will continue to play out on emerging platforms opening the doorway for future OSINT-investigations (e.g., users' need to post, link, like and share information to enhance their own ego, and individuals leaving their profiles open because they are inattentive about their digital security and privacy). Moreover, they expect that crime groups such as terrorist organisations will continue to require a public presence (e.g., for recruitment or to enhance their image), whereas offenders trying to groom children will still have to establish contacts over platforms that are popular with children. These activities will leave traces OSINT-investigators expect to follow and continue exploiting in future.

Threats from 'bad actors'

'Bad actors' refers to individuals or groups that aim to exploit OSINT-methods for criminal or malicious intent. According to survey results bad actors are a concern, although only to a moderate degree (m=3.00, sd=0.83). Experts highlighted the dangers of 'sharing too much', particularly by 'more senior officers'. Oversharing can create vulnerabilities to entire police departments; as one expert recounted it was possible to map 'their whole force from top to bottom' using free OSINT-tools. Whilst officers cannot be expected to live without an online presence, experts emphasised that keeping a minimal digital footprint is essential, especially as social media companies constantly modify privacy settings with potential implications for the exposure of private material. A growing challenge is

that new police recruits often have a long-standing social media presence, which is almost impossible to erase. Experts emphasised the need for prevention by raising the general level of awareness about digital footprints and 'how to stay private online' including training at all levels of police organisations. They suggested that OSINT-investigators should regularly conduct OSINT on themselves to obtain a picture of their own (and/or their colleagues') online exposure.

Discussion and Implications

Our results offer important insights for police organisations, policy makers as well as the status of OSINT as a discipline. Starting with the areas for which OSINT-investigations will be relevant, we found that high-visual impact areas (CT, CSE, SOC) emerged as primary future applications. Given that OSINT-specialisations across participants are quite broad our findings on areas seems to showcase a consensus across investigators on the large topic areas. At the same time, the question was raised whether OSINT should be retained as a 'specialist profession' located within expert teams. Some experts suggested that OSINT should be opened up to others such as frontline and community policing officers, which indicates a shifting understanding of OSINT as an investigation method. OSINT is already increasingly interwoven with other areas such as DMI or forensics. Experts saw value in an even broader approach that applies OSINT across all policing areas. In this perspective, OSINT would – and should – become a generalist tool instead of a specialist capability. For LEAs, this would require breaking down organisational and cultural barriers that often exist between specialist OSINT-experts and other policing disciplines as well as making trainings, tools and OSINT-resources available to staff not yet involved in OSINT-efforts.

Chief amongst highlighted challenges and their consequences for OSINT-use emerged securitisation/privacy movements resulting in the potential blurring between overt and covert procedures. Handling these challenges well is critical for the long-term validity and reliability of investigations (Bayerl & Akhgar, 2015; Walden, 2018). The UK has started this process, re-labelling OSINT as 'III' (Internet Intelligence and Investigations).[6] This deployment model incorporates overt and covert investigations, presenting a considerable change into how OSINT is understood and positioned. Addressing this issue alters and widens again the remit of OSINT, although in a different way than above: It results in breaking down the traditional demarcation between OSINT and covert investigations, in the process challenging existing legal and ethical frameworks. This calls for rapid and fundamental answers from policy and law makers.

6 https://www.uk-osint.net/documents/Internet_Intelligence_&_Investigations_Strategy_v13.pdf (Accessed: 20. September 2022)

Experts' wish-list of future OSINT-capabilities can be seen as a reflection of this increasing difficulty to access online data, combined with its growing volume and fragmentation. The wish-list focused strongly on efficiency gains (e.g., through automation and platform integration) and the handling of additional data sources. New data sources and new capabilities such as those requested by experts in our study require updates to ethical guidelines and legal regulations. Experts identified a number of pertinent legal and ethical questions that still need clarification, not only addressing 'how much' and 'in which ways' data should be gathered in investigations, but also the balance between human versus machine in decision-making following the envisioned automation of OSINT-processes.

Especially with respect to AI, our findings unearthed highly differentiated perspectives that identified significant potential but also considerable challenges to its large-scale implementation on technological, procedural and legal/ethical grounds. Experts made concrete recommendations about how to manage human and technological inputs in OSINT-investigations and the imperative of keeping humans 'in the loop' to avoid unexpected negative results of automation. In addition, police organisations should make efforts to be involved in the development and design of OSINT-related technologies such as predictive models and AI, to avoid the 'generic', 'black box' applications dreaded by our experts. This would help ensure that police organisations are not only users of OSINT-related technologies but can crucially shape systems to adhere to policing principles and effectively support the investigative process from source identification to evidence in court.

The 'wish-list' of capabilities and challenges identified in our study also clearly requires additional resources, training and support. OSINT-investigators, for instance, acknowledged a lack in awareness and training concerning threats by malicious actors. Such calls for more training are common across expert areas (e.g., Burcher & Whelan, 2018). Yet, training needs may also lay beyond the one's experts identified. For instance, the concern that research on and development of AI-applications and algorithmic models cannot use actual police data may reflect public opinions rather than the state-of-the-art in AI. To ensure that OSINT-investigators remain up-to-date with emerging technologies (e.g., IoT, AI, darkweb, blockchain), it is crucial that technological knowledge of investigative staff keeps pace with technological advancements. Strategic levels should equally request regular updates and trainings to guide decisions about which innovations to invest in and whether and how to adapt organisational procedures, as staying abreast of technological and societal changes requires continuous organisational awareness and flexibility to scope and react to technological, legal as well as societal developments.

Limitations and future studies

Our observations are based on evidence from an international group of experienced OSINT-investigators to achieve a broad view on future developments and challenges. While they probably played into discussions, country-specific issues were not in the scope

of our study and will require more targeted investigations; especially as there is yet to emerge an inter-organisational or even international consensus about OSINT-principles. Future investigations should also be conducted into how police organisations and policy makers together will react to the issues and recommendations outlined in this paper and the long-term effectiveness of such measures.

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Resilience in Law Enforcement Technology Design and Development: Analysing user requirements for current approaches in European border security research and innovation

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Abstract
The COVID-19 pandemic has accentuated the meaning of resilience for European digital infrastructures which safeguard vital societal functions, such as the activities of European law enforcement authorities. The pandemic has vividly illustrated that unreliable IT-systems and networks cripple also authorities' business continuity and access to critical information when alternative processing methods remain scarce during times of transformed social interaction. The development of resilience thus demands research and innovation investments also in the future, as emerging risks, both physical and human-made, may produce long-lasting consequences to systems critical to European safety and security. In EU-funded security research, resilience has formed a well-established concept even before current events and prolonged crisis, however, not uniformly across all law enforcement domains. This article focuses on border security research in the H2020 programme and analyses how resilience is addressed within this field. The H2020 programme underlines practitioners' decisive role in determining the requirements for future technological solutions. Therefore, we concentrate on the initial stages of the systems design and development process, in particular the user requirements elicitation phase. The article's specific aims are to identify preliminary resilience perspectives, which users convey forward in the design and development process, and propose future research directions to strengthen resilience thinking also in the border security domain.

Keywords: *Research and Innovation, Border Security, Resilience, Human-Centred Design, User Requirements*

Introduction

The COVID-19 pandemic has challenged and thoroughly tested the resilience of European digital infrastructures which maintain and support vital societal functions, such as the operations, daily tasks and processes of different law enforcement authorities (LEA) in EU Member States. In the area of EU's Justice and Home Affairs (JHA), a prolonged period of social distancing visibly demonstrates the high reliance of actors and organisations on digital technologies in terms of access to information, business continuity and availability of critical IT-systems and underscores the technologies' pivotal role in safeguarding LEA core functions, particularly from the perspective of societal resilience (eu-LISA, 2020). As the pandemic limits society's abilities to resort to alternative processes, expectations towards the dependability of IT-systems in delivering reliable services increase. EU's new Cybersecurity Strategy and the European Commission's proposal for a new directive prioritise the position of resilience within European policies related to critical entities and networks (European Commission, 2020a). Effective adaptation to potentially long-lasting consequences of new risks requires further development of resilience in decisive systems.

Even before the ascent of the current pandemic and renewed policies, resilience enjoyed an accentuated position in EU-funded security research that aims to support and improve the capabilities of governmental organisations working towards societal safety and security in Europe. In the Horizon 2020 (H2020) Research and Innovation Programme of the European Union (2014-2020), resilience has formed a central concept for research activities particularly related to the protection of critical infrastructure, the development of Artificial Intelligence (AI) technologies, disaster management and digital security, and novel technologies constitute one key means to enhance the resilience of critical systems (European Commission, 2020b). However, besides significant benefits, new technologies may predispose critical systems to novel risks that have also the potential to cascade, particularly in highly networked and interdependent societies (Linkov & Palma-Oliveira, 2017).

Since the start of the millennium, digitalisation has significantly transformed European border management not only in authorities' back-end processes but also at the level of equipment, tools, and systems implemented to the monitoring and controlling of EU's external borders and the cross-border flow of persons, goods, vehicles and vessels. Initiatives to enhance digitalisation and harmonisation of practices at borders were established already a decade ago (more on 'Smart Borders' policy, see for example Lehtonen & Aalto, 2017; Jeandezboz, 2016), and system interoperability together with innovative technologies increasingly form the cornerstones of border authority capabilities against

emerging risks. These developments argue for a more holistic assessment of the ways in which novel border security technologies tolerate, recover and adapt to foreseen or unforeseen changes during their expected service life. According to Linkov & Palma-Oliveira (2017), resilience-based approaches enable the assessment of system capabilities needed to ensure dynamic adjustment to various transformations that affect systems negatively. Nevertheless, border security research calls address resilience primarily from a societal perspective (European Commission, 2020b), while explicit requirements towards improving the physical and digital resilience of a system are less-documented. Overall, focus "on the (technical) resilience of smaller systems" (Häring et al., 2017: 23) remains scarce; a characterisation which may also apply to border security research.

The primary objective of this article is to examine the manifestation of resilience approaches in the H2020 border security research. Border security interfaces and integrates with the law enforcement domain at different levels for example through institutional and organisational ties (Center for the Study of Democracy, 2011) and approaches to harmonise LEA training and crisis management within Europe and beyond (Frontex, 2020; Taitto & Hyttinen, 2018). The H2020 programme highlights active participation of security practitioners in research, and assigns key end-users a significant role in defining and establishing the requirements for future technological solutions (see for example European Commission 2015a, 2017, 2020b). As a result, we concentrate on the initial stages of the systems design and development process and analyse the ways in which the user needs elicitation phase acknowledges system resilience attributes. The article's specific aims are to identify preliminary resilience perspectives, which users convey forward in the design and development process, and propose future research directions to strengthen resilience thinking also in the border security field.

Theoretical points of departure

Engineering systems and resilience

Constructing resilient systems is a challenge that systems engineering pursues to answer both as a scientific discipline and as a pragmatic activity. Fortifying resilience in complex systems constitutes an increasingly important task due to the dynamic nature of emerging risks and threats that overburden systems (Small et al., 2018). Engineering resilience is not only about building-in resilience through certain techniques, but also about ensuring ways in which the resilience of a system can be maintained or managed in the long run (Hollnagel, 2010a).

The definition of resilience depends on its application context, use incentive or research discipline to a large degree (Curt & Tacnet, 2018; Park, 2011; Uday & Marais, 2019). Infrastructure research defines system resilience for example as follows:

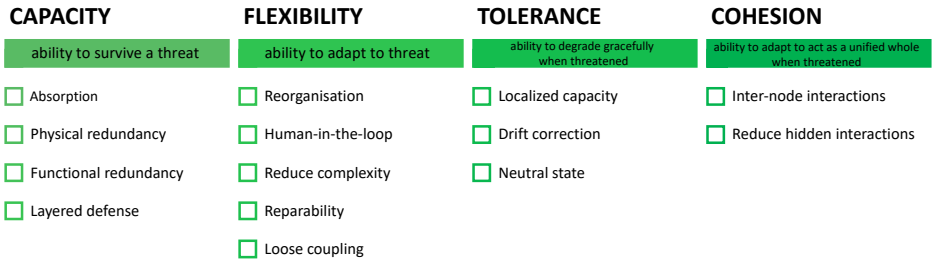
"Given the occurrence of a particular disruptive event (or set of events), the resilience of a system to that event (or events) is the ability to efficiently reduce both the magnitude and duration of the deviation from targeted system performance" (Vugrin, 2010: 83).

Another definition proposes that resilience is "the intrinsic ability of a system to adjust its functioning prior to, during, or following changes and disturbances, so that it can sustain required operations under both expected and unexpected conditions" (Hollnagel, 2010b: xxxvi). Resilience research tends to oppose a static view on system capabilities but claims them being susceptible to temporal alterations that originate from system performance and capacity variations transpiring in different time periods (Linkov & Palma-Oliveira, 2017).

Certain qualities can be said to characterise a resilient system. For example, Hollnagel (2010: xxix) establishes that a resilient system has to possess the four following abilities: "the ability to respond to events, to monitor ongoing developments, to anticipate future threats and opportunities, and, to learn from past failures and successes alike". Particular system capacities, either endogenous (internal) or exogenous (external), are also applied to define resilience. First, absorptive system capacity relates to "the degree to which a system can automatically absorb the impacts of system perturbations and minimize consequences with little effort". Adaptive system capacity on the other hand refers to "the degree to which the system is capable of self-organisation for recovery of system performance levels", while restorative capacity is "the ability of a system to be repaired easily". (Vugrin, 2010: 99-101) In contrast to engineering fail-safe systems, an objective of 'traditional risk analysis', resilience management emphasizes the construction of systems that exhibit flexibility and adaptive capabilities to function in new circumstances arising after adverse events. Resilience management thus aspires to ensure that adverse events do not permanently deteriorate a system's functions and performance. The time horizon for resilience management expands that of risk management. (Linkov & Palma-Oliveira, 2017)

With regards to design principles, Jackson and Ferris (2013) propose a taxonomy of 14 principles organized into four attributes guiding the engineering of resilient systems. Figure 1 defines the attributes (capacity, flexibility, tolerance, cohesion) and lists related design principles under each attribute.

Figure 1. Taxonomy of resilience for engineered systems. Reproduced and modified from Jackson & Ferris 2013, p. 155



Research and innovation projects accentuate also other desirable system qualities than only resilience, such as performance, productivity, compatibility with adjacent systems or compliance with legal and ethical requirements. The primary objectives of European border security research demonstrate this by emphasizing the need "to enhance systems and their interoperability, equipment, tools, processes, and methods for rapid identification to improve border security, whilst respecting fundamental rights including free movement of persons, protection of personal data, and privacy" (European Commission, 2020b: 14).

Project objectives often question the feasibility or suitability of all resilience principles for a single system, as trade-offs may need to be made within them, such as whether to implement high physical or functional redundancy at the cost of achieving less complex designs (Jackson & Ferris, 2013). In addition, resilience requirements exhibit interdependence (Jackson & Ferris, 2013), and complement or overlap with other important system properties (Firesmith, 2020). In general, research tends to contradict in whether resilience requirements form a specific requirement group and clearly differ from system requirements that relate to other quality attributes, such as robustness, safety, cybersecurity, or anti-tamper (Firesmith, 2020). Furthermore, some system attributes are considered to "enable systems to achieve resiliency", such as adaptability, extensibility, flexibility, repairability and versatility (Enos, 2019: 389-390).

User involvement in system design processes

Several studies, addressing different contexts and fields, highlight the value and contribution of user or human involvement in technology design and development (see for example Leikas, 2009; Kujala et al., 2005; Karvonen & Martio, 2018; Niemelä et al., 2014; Aaltola, 2021; Aaltola, 2020). User involvement is claimed to enhance system usability, usefulness, user satisfaction and overall success (Kujala et al., 2005), and breed innovations in product development processes through direct interaction via interviews or through

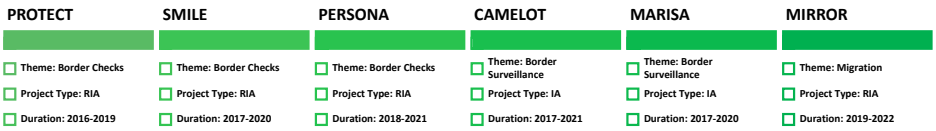
observation of user behaviour in real-life use situations and contexts (Dell'era & Landoni, 2014). Users fill an important knowledge gap, as assuming the role of an inexperienced user is considered unattainable for developers (Wallach & Scholz, 2012). Despite multiple benefits associated with human centricity of design, research also reports various challenges pertaining to the role of users in related processes and particularly emphasizes the importance of scientific or evidence-based information to which design decisions need to be grounded (Saariluoma, 2005; Reymen, Whyte & Dorst, 2005; Luck, 2003).

In the H2020 funding programme, project eligibility and admissibility conditions formalise the involvement of practitioners or user representatives at the very general level in certain topics, particularly those related to security research (see for example European Commission 2020b). This conforms to the lessons learned from the preceding Framework Programme 7 that demanded "more active end-user participation" in future programmes (European Commission, 2015b: 72). For example in border security related sub-topics, the eligibility and admissibility conditions require projects to actively engage a minimum of three EU Member State or Associates Countries' authorities (European Commission, 2020b). The elementary reason to design and develop technology also applies to security research; technology can and should essentially improve the quality of life (Saariluoma, Cañas & Leikas, 2016). Involving users thus enhances the understanding of what technology could actually offer for people in practice, and in what forms or under what terms it would be welcomed and adopted efficiently.

Data collection and analysis in brief

For the purpose of this paper, we reviewed all on-going and closed H2020 Border and External Security (BES)-projects under the action types of Research and Innovation Action (RIA) and Innovation Action (IA). The collection of project data in the Community Research and Development Information Service (CORDIS) repository revealed that 25 BES-projects are or have been financed since the start of the H2020 programme until October 2020. However, the final selection of projects reduced to six (6) as only these projects grant access to deliverables concerning user needs and requirements. During the research, it became clear that in most of the projects, user needs or requirements related deliverables have been assigned a dissemination level Confidential or EU RESTRICTED which limits project documentation availability. Figure 2 presents a list of the examined projects.

Figure 2. List of analysed projects. The projects may be categorised at the general level in terms of context-relevant focus: border checks, border surveillance and examination of prospective migrants' perceptions of Europe



The projects identify and analyse user needs and user requirements. As the distinction between the terms is ill-defined, we apply user needs and user requirements interchangeably in this paper. Overall, most projects include a user needs analysis task in their work, and the projects seem to be structured according to standard systems development processes (for example the V-model by Clark, 2009), in which user requirements are identified and specified at the beginning and validated towards the end of a project. Projects implement partially differing reporting methods for user requirements. Some projects produce several versions of user requirements documents, while others specify requirements in a single deliverable.

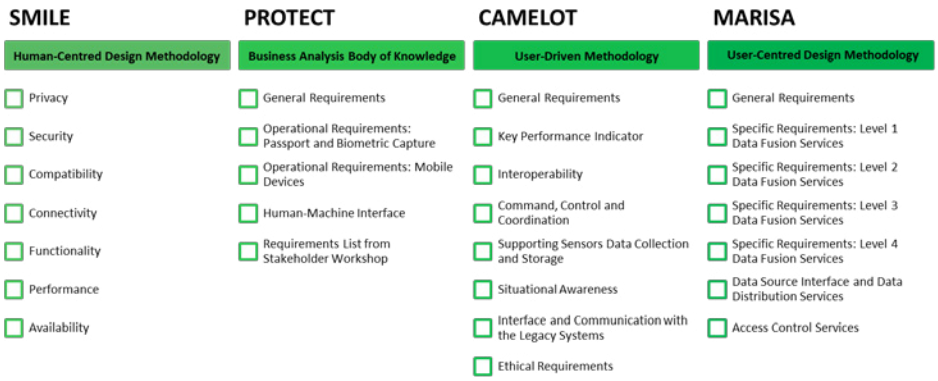
Following the desk study consisting of empirical data collection, we conducted a comparative analysis between the selected projects' user requirements. Firstly, we examined and compared the applied methodologies for user needs elicitation with the aim of seeking potential areas of similarity or difference between the projects. Secondly, we studied how the requirements were structured and categorised to identify reoccurring system quality attributes. Finally, we investigated how resilience-relevant user requirements are analysed and reported. As resilience has not been in focus in the H2020 border security research projects, it was not assumed that resilience would strongly surface from the projects' research outputs and in their overall technology development. Thus, we investigated whether the requirements address relevant capabilities or features that enable systems to efficiently resist, recover and adapt to the effects of events which negatively influence a system's critical functions for certain a time period or indefinitely.

User requirements approaches in projects and the identification of resilience requirements

The examined projects tend to emphasize a human-centred, user-centred, or user-driven approach towards requirements specification and system design. Key standards or established business practices, such as the ISO 9241 series on ergonomics of human system interaction (revising former ISO 13407 series) or the Business Analysis Body of Knowledge ('the BABOK Guide'), constitute the methodological foundations of the selected design approaches. The projects implement the main principles of human-centred design (Inter-

national Standardisation Organisation, 2019) for example by 1) gathering information and describing in detail future system users and the envisioned implementation environments; 2) engaging users to different phases of system design and development; 3) emphasizing the role of users in the evaluation of project outputs; and 4) applying an iterative process to specify requirements. The projects employ various research methods to each principle for example with regards to how the user requirements are identified or prioritised. In itself, user requirements specification forms one important activity in human-centred design with the aim "to create an explicit statement of user requirements in relation to the intended context of use and the business objectives of the system" (International Standardisation Organisation, 2019: 13). Project documentation (i.e. analysed deliverables) can be understood as that explicit statement of user requirements specified for the objectives of a particular project. The finalised requirements demonstrate key discrepancies, despite the projects share the same methodologies for the overall design and development process. Particularly, the projects typify and cluster user requirements differently. Figure 3 summarises the main methodologies and user requirements classifications in an example set of projects.

Figure 3. Implemented methodologies and requirement classification in four projects



Our analysis indicates that human-centred design poorly guides towards harmonised classification of user requirements after their identification and specification have been performed. On the contrary, the classification appears project-dependent and originates 1) bottom-up from the requirements identification and analysis process, 2) top-down from the system and its envisioned functions or other important aspects being developed in the project, or 3) their mixture. Together with the main requirement classes, the projects typify user requirements into functional and non-functional requirements. Functional requirements refer to "what the product has to do, the rules that it has to carry out or what processing actions it must take", while non-functional requirements describe "the properties that the functions must have, such as performance and usability" (Atlantic Systems Guild Limited, 2016: 7). However, some projects perform this kind of classification at a next

stage of the requirements engineering process, in which user requirements are developed into system requirements (a requirement type that is distinctive from but related to a user requirement). Overall, the projects tend to lack consistency in the requirements classification into functional and non-functional, if one reflects individual requirement specifications against definitions proposed by the requirements engineering literature.

Our analysis of the project outputs at the classification level shows that the concept of resilience manifests weakly in the user requirements data. Resilience does not form an explicit primary or secondary requirement class, or a visible system quality attribute as presented in the theoretical section of this article. Overall, the analysed materials lack a definition for resilience and cover the terms resilience, resilient, or resiliency in a limited way. Identifying distinctive resilience requirements from the set of user requirements thus becomes unfeasible.

Nevertheless, certain requirement classes may indicate a relation to resilience, such as availability or security. A requirement may establish that a 24/7 access to the system must be guaranteed (SMILE, 2019) or the data transmission and overall communication must be secured (SMILE, 2019; PERSONA, 2019). Also, certain requirements typified under so-called general requirements can be relevant for developing system resilience. An individual requirement may establish for example that the system "must work continuously without critical failures, regardless of weather conditions (clear, fog, rain, thunderstorms) or time of day (dawn, day, dusk, night)" (CAMELOT, 2018: 44) or it "shall guarantee high availability (e.g. MTBF 10.000 hours without major faults compromizing the continuation of the nominal mission) of data and services" (MARISA, 2019: 30).

Although traits of resilience can be detected in some user requirements, presenting these as distinctive resilience requirements involves a great deal of interpretation and requires further analysis of project objectives and other information. This may eventually erode the reliability of such analysis, as individual researchers may arrive at alternative interpretations. However, what this paper does suggest is that users indeed emphasize the importance of resilience-relevant system properties, as users conveyed such needs in the needs identification process. Nevertheless, the current analysis cannot ascertain whether the users expressed these needs or requirements for the purpose of designing a *resilient* border security system from a physical, digital, or other perspective. Resilience requirements, if interpreted as such, appear mostly in a scattered form across the project materials.

Concluding remarks and future outlook

In the Justice and Home Affairs domain, policy demands and grass-roots level development needs accentuate the growing importance of digital infrastructure resilience. As the

role of technology in LEA operations expands, and the implemented systems increase in complexity with direct human-in-the-loop possibilities subsiding, questions relating to the necessity of resilience and its design into critical systems become even more topical (see for example Uday & Marais, 2015). Still, to make resilience truly actionable, there is an apparent need for "a definition and an explanation of an observable, measurable system attribute" to avoid resilience remaining "a vague concept rather than a practical policy or management tool" (Fekete et al., 2014: 5). As the JHA community seems to lack a shared definition for digital resilience (eu-LISA, 2020), substantial work lies ahead to ensure an efficient exploitation of lessons learned and avoidance of prior pitfalls experienced in other domains. For border security risk analysis, shared models and frameworks have already been developed at the European level (Frontex, 2013), and research initiatives on risk-based approaches towards border management are progressing (for example the TRESSPASS project http://www.trespass-project.eu/).

In this paper, we examined how resilience is addressed in contemporary border management – a distinctive activity in law enforcement. We focused our examination to border security research within the H2020 programme and narrowed our analysis to particular activities in system design and development processes within a selected set of projects. To bridge the gap between broad policy objectives of resilience and border security operations at the practitioner level, we scrutinized how resilience currently manifests in the needs and requirements established by prospective users of future innovative technologies. Identification and specification of user requirements comprise one means to understand what users expect and demand from new systems and tools.

The results of this study indicate that resilience is an underused design principle, a concept (resilience-by-design) or an aspired system quality attribute in the current border security research. Relevant requirement classes and individual requirements may be identified in the set of requirements, however, the reliability of this interpretation can be challenged as no explicit references to resilience are made. Our analysis concludes that the projects' main objectives are situated elsewhere than in resilience, and the primary resilience qualities as defined for example by Jackson & Ferris (2013) do not strongly drive the projects' design and development process, at least in the initial phases. New solutions are developed to provide border management authorities with efficient tools against known and emerging risks and threats, such as terrorism, piracy, cybercrime, and diverse kinds of fraud. However, research initiatives promoting for example the development of absorptive, adaptive or restorative system capacities (Vugrin, 2010) against a suite of different physical and digital risks, both natural and human-made, are still limited. This might also prompt for a more systems theory based approach, since resilience can be understood as an emergent system property which cannot be reduced to lower level system capabilities that individual components might provide (see for example Leveson, 2012).

Although the current examination yielded compelling results, the limitations of our work need to be acknowledged as well. Due to restricted access to materials, we examined only a part of all H2020 research projects in the Border and External Security topic. As border management systems are highly security-critical infrastructures contributing to the national security of EU member states and EU's internal security as a whole, threat, vulnerability and capability assessments or related scenarios remain mostly confidential (see for example European Commission, 2020c). Additionally, within the examined six research projects, we focused our inquiries only on a limited set of project outputs and documentation that relate to specific tasks and parts of the projects' work. Somewhat heterogeneous methods and practices applied in the analysed projects challenged a meaningful cross-comparison of project outputs, as coinciding data were difficult to identify. As other safety and security specific H2020 topics (e.g. disaster management) concentrate more on resilience, a comparative analysis between border security research and the aforementioned fields could substantiate our findings and provide added value in developing suitable resilience approaches also for border security purposes. Moreover, it might provide better understanding how user involvement can be utilised in the engineering of resilient systems. Without achieving "a universal understanding of resilience" (Francis & Bekera, 2014: 92) within the JHA community or border security for that matter, it can be difficult for users even to express needs and requirements for such a system, if the concept remains elusive in its meaning.

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Attitudes towards the Corona Crisis in the Police Force: Outcome of an employee survey in the German state of Saxony

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Abstract

What personal attitudes and perspectives shape police employees' view on the COVID-19 pandemic? How do they assess the dangerousness of the coronavirus as well as the handling of the pandemic by society and the media? What are their opinions on the measures to contain the pandemic — personally as well as concerning their official duties? And how does all this affect their level of mental stress? These questions are answered based on original data from a standardized survey among employees of the police in the German state of Saxon, carried out between October and November 2020. The results[2] indicate that the diversity of opinions among Saxon police employees essentially reflects the spectrum of views that was also evident in the state of Saxony and also for the German public in the region, during the survey period. At the same time, police-specific peculiarities are apparent and furthermore, the attitudes and perspectives towards the pandemic form consistent attitudinal patterns. Using cluster analysis, three different attitudinal types were found in the Saxon police: concerned interventionists, unconcerned sceptics, and hesitant conformists. These attitudinal types show consistent patterns of attitudes and perspectives on the pandemic. They also

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2 This manuscript is based on Meißelbach et al. (2022).

report different levels of mental stress in the performance of their duties. The outcome contributes to a deeper understanding of the police force under the conditions of crisis and polarization. As such, they have implications for leadership communication and organizational cultures in a democratic police force.

Keywords: *Police, COVID-19 pandemic, attitudes, mental stress, leadership*

The study: aims and research design

When the Corona pandemic hit Germany in spring 2020, it posed unprecedented challenges for the country's law enforcement agencies. Thus, the pandemic became a severe test for both, the police as an institution and its employees. The police organisation – including its leadership and staff – not only had to adapt to the circumstances of a massive crisis within a very short period of time, but the force's actions also were a crucial element of the drastic changes within social reality. At the same time, police employees experienced these developments not only as members of the police force but also as citizens of a democratic state. They developed individual ideas and attitudes towards the virus' significance for society as well as in regard to the political measures taken to combat the pandemic.

This situation has borne the potential for considerable internal tensions within the organisation and amongst its members. After all, police officers can have very different views on the rules they have to implement within the framework of their official duties. This was especially the case, since the police had to participate in drastic restrictions of fundamental rights that had been taken for granted. In addition, views on the appropriateness of such measures were controversially discussed by the public and even among experts. Furthermore, all this took place in the context of increasing polarisation and intensification of political disputes within society, putting under stress the legitimacy of the police organisation as well as its actions towards the citizens.

Against this background, it seems useful to examine personal attitudes towards the Corona crisis within the police. What personal attitudes and perspectives shape police employees' views of the pandemic? How do they assess the dangerousness of the virus as well as the handling of the pandemic by society and the media? What are their opinions on the measures to contain the pandemic – personally as well as concerning their official duties? And how does all this affect their level of mental stress?

These questions will be addressed in this article, based on data from a survey among employees of the police in the German state of Saxony. The data collection took place from

20 October to 17 November 2020 as an anonymous online survey.[3] A total of 2,829 of the almost 15,000 employees took part. In the end, 2,323 completed questionnaires were included in the evaluation, resulting in an effective response rate of 15 percent.[4] This level is clearly below the usual response rates for employee surveys, where respondents are usually contacted personally by email. In the present case, this was not feasible due to the high data protection standards within the police. Instead, calls for participation were published several times on the intranet of the Saxon police. Furthermore, the heads of all Saxon police directorates received an e-mail asking them to forward the call to their subordinates.

Table 1. Socio-demographic composition of population and survey sample

Variable	Characteristic	Saxon police force (n = approx. 15,000)	Survey sample (n = 2,323)
Sex	male	68.9 %	70.0 %
	female	31.1 %	30.0 %
Age	under 18	0.3 %	0.04 %
	18-24	9.7 %	6.1 %
	25-34	21.8 %	21.6 %
	35-44	23.4 %	29.5 %
	45-59	38.7 %	39.6 %
	60 and above	6.2 %	3.2 %
Career level	Career level 1 (e.g. intermediate service)	51.5 %	45.0 %
	Career level 2.1 & 2.2 (e.g. higher intermediate & higher service)	30.7 %	45.4 %
	other employees	17.8 %	9.6 %

Source: Own table based on own research (survey sample) and data kindly provided by the Saxon State Ministry of the Interior (population of the Saxon police).

Nevertheless, the survey data provide a reliable basis for drawing conclusions about the Saxon police as a whole. As Table 1 shows, the survey sample reflects the socio-demographic structure of the target population quite well by age, gender and career level. However, sample biases could not be completely avoided. Such biases were compensated for by adjustment weights based on objective data on the socio-demographic composition of the Saxon police. Last but not least, unavoidable biases were taken into

3 During this time, Germany experienced its second wave of the Corona pandemic with the second lockdown beginning on 2nd November, followed by protests against the Corona measures by the "Querdenken" movement on 7th November in Leipzig.

4 The data set was cleaned of questionnaires with less than 75 percent of the questions answered or completed in an unrealistically short time (here: less than four and a half minutes).

account by interpreting the data carefully. For example, staff with frequent access to the internet at work (e.g. administrative staff) were more likely to be included in the sample. All in all, the results of our study turned out to be highly plausible. Wherever possible, they were compared with other studies. It can therefore be assumed that the attitudinal patterns and their distributions found in the data do exist in the whole population of the Saxon police as well.[5]

However, generalizations to other police forces in Germany and Europe should be made with caution for at least two reasons: Firstly, the results on political attitudes within the Saxon police force reflect the particularities of East Germany's political culture (Pickel 1998) which have persisted over 30 years since reunification (Dalton & Weldon 2010; Pickel & Pickel 2022). In fact, some findings suggest that political culture in East Germany might be even closer to other post-soviet countries in Eastern Europe than to the western part of Germany or even Western Europe (Pickel 2016; Rainer et al. 2018; Wike et al. 2019). Secondly, there is a lack of recent comparative research on politically relevant attitudes within police forces, especially about the Corona pandemic. Therefore, it is still an open question what the findings presented here tell us about the police force as a social phenomenon in general. Overall, police officers seem to be more conservative and traditionally oriented than the general public (Rokeach et al. 1971; LeCount 2017; Ashlock 2019). They are part of a distinctive occupational identity and police culture coined by police-specific common traditions, experiences and narratives (Reiner 2010; Crank 2014; Paoline & Gau 2018; Cenk Demirkol & Nalla 2020). Concerning the Corona pandemic, one important part of this unique perspective seems to be an unease regarding the police-specific task of imposing severe restrictions on fundamental rights (Grutzpalk et al. 2022). Thus, it seems plausible to assume that the perspectives of police staff on the pandemic differ systematically from those of the general public.

This paper contributes to these research objectives with a case study of a democratic police force under the special conditions of the East-German socio-political context. The results indicate that the diversity of opinion among Saxon police employees essentially reflects the spectrum of views that was also evident in Saxony and among the German public during the survey period. At the same time, police-specific peculiarities are apparent. Furthermore, the attitudes and perspectives towards the pandemic form consistent attitudinal patterns. Using cluster analysis, three different attitudinal types were found in the Saxon police: concerned interventionists, unconcerned sceptics, and hesitant conformists. These attitudinal types show consistent patterns of attitudes and perspectives on the pandemic and report different levels of mental stress in the performance of their duties.

5 For more detailed information on methods and research design of the study see (in German) Meißelbach et al. (2021).

The results contribute to a deeper understanding of the police force under the conditions of crisis and polarization. Furthermore, they have implications for leadership communication and organizational cultures in a democratic police force. The question of whether these attitudinal types and their frequencies are typical for police organizations in Germany, Western democracies, or even beyond, should be the subject of comparative research in the future.

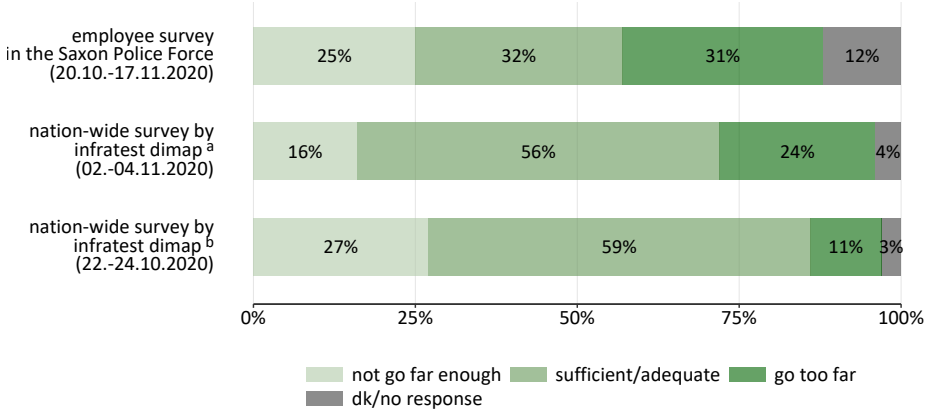
The findings: Attitudes on coronavirus and the pandemic response

The attitudes: Assessment of measures, sanctions, the virus and societal reactions

Almost all police employees are directly or indirectly involved in the enforcement of the pandemic response measures. However, when asked whether the measures in place at the time of the survey in autumn 2020 were appropriate, respondents' opinions were mixed. One-third of them said that the measures in place were "just about right". However, another almost one-third thought the measures "went too far", while a quarter thought they "did not go far enough". Approximately one in ten said they could not judge.

Figure 1. Attitudes towards the Corona measures in the Saxon police and the German public

"All in all, are the current Corona measures in Saxony/Germany sufficient/adequate, do they go too far or do they not go far enough?"



The illustration is based on the data of 2,323, (a) 1,002, and (b) 1,004 persons. Source: own representation based on (a) infratest dimap (2020c), (b) infratest dimap (2020b) and own research.

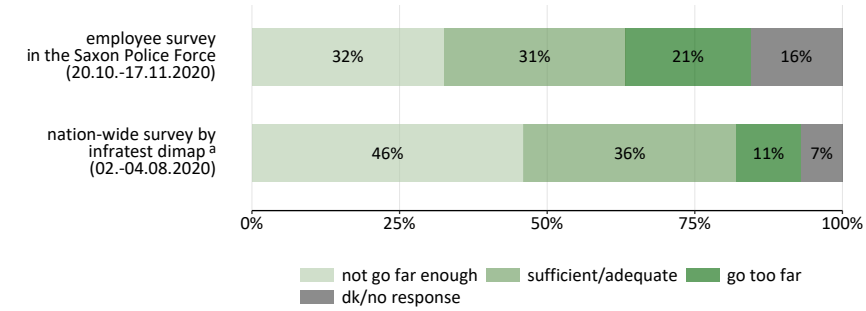
This diversity of opinion among Saxon police employees essentially reflects the spectrum of views that was also evident in Saxony and the German public during the survey

period.[6] As can be seen in Figure 1, attitudes on the appropriateness of the measures were more polarized in the Saxon police than in the population as a whole. While more than half of the respondents in Germany considered the pandemic response measures to be "appropriate" or "just about right", only one-third of the Saxon police did so. Consequently, the proportion of the two groups that felt that the measures did not go far enough, or already went too far, was higher in the Saxon police than in the population as a whole. However, in such comparative analyses, it must be kept in mind that attitudes to this topic vary greatly over time, especially since the policies in pandemic control changed repeatedly.

Moreover, it is not surprising that employees of the executive branch assess an issue so crucial for their (professional) life quite differently than 'normal' citizens. Many of the respondents were entrusted with the implementation of these measures, providing them with special insights into the practical limits of regulating public and private life. Some certainly also saw the police being put in a difficult position in relation to society and were worried about the damage to their public image and legitimacy. In any case, the findings indicate a higher level of uncertainty among the police compared to the population as a whole, as to whether the path taken to contain the pandemic was the right one. This is also indicated by the fact that in our sample a comparatively large number (namely twelve percent) of police employees stated that they were unable to assess this question.

Figure 2. Attitudes towards sanctions for violations in the Saxon police and the German public

"Overall, are the existing sanctions/punishments for violations of the applicable Corona measures sufficient, do they go too far or do they not go far enough?"



The illustration is based on the data of 2,323 and (a) 1,002 persons. Note: Where – as here – the percentages in figures do not add up to 100, this is due to rounding of the individual values. Source: own representation based on (a) infratest dimap (2020a) and own research.

6 The only data available for Saxony at the time of our survey fits well with the findings shown in Figure 1, but is not directly comparable due to a differently formulated question: In a survey by INSA (2020) at the beginning of November 2020, 38 percent of the Saxons surveyed considered the current Corona measures to be "overall appropriate" in view of the infection numbers. A further 16 percent thought they were "overall overblown", while 28 percent felt only "some" of the measures were overblown in view of the infection numbers; 13 percent thought the measures "should be further strengthened".

The attitudes towards sanctions for violations of pandemic control measures show similar patterns (Figure 2). Like the attitudes towards the measures themselves, they can be understood not only as an expression of comparatively great uncertainty about the right course of pandemic control but also as an indication of the practical limits to the enforcement of this course of action. The support for severe punishment was significantly less pronounced in the Saxon police than in the population as a whole during the survey period. The proportion of those who did not take a clear position on this question was also conspicuously higher in the police sample. Moreover, the share of those who found that the sanctions did not go far enough was bigger than in the case of the measures themselves. This means that even among those who felt that the measures were appropriate, some believed that they should be enforced more consistently.

Whether respondents found the measures and their sanctioning to be appropriate depended clearly on how dangerous they considered the coronavirus was (Figure 3). At least a quarter of the employees in the Saxon police assessed the statement that the coronavirus was no more dangerous than a normal flu as "rather" or "completely" true. Another fifth could not clearly position themselves ("undecided"). It is also striking that a comparatively large number of respondents (almost 16 percent) refused to answer ("cannot/do not want to answer"). This, once again, indicates a high uncertainty within the police organisation on how to deal with this socio-politically sensitive issue.

Nearly one third of respondents "rather" or "completely" held the opinion that the media exaggerates the health risk of an infection with coronavirus. Just as many had the impression that this was "rather not" or "not at all" the case. The response behaviour for questions related to infection concerns and to the assessment of the measures correlates in a quite plausible manner: Among respondents who considered the coronavirus to be of little danger, the concern about infection was also clearly lower and an assessment of the measures as too far reaching was also much more widespread.

Nearly one-third of the respondents in the Saxon police assessed the coronavirus as not being as dangerous as indicated by the central actors in science, politics and the media, at the time of the survey. Once again, this reflects a diversity of opinion that also exists in German society. For the police, however, this situation is not unproblematic because this particular pattern of perceptions and attitudes is a potential root for the fundamental rejection of the pandemic response measures that they were obliged to implement. Not only would the public, that for the most part supports the pandemic measures, perceive it as disturbing if such attitudes were clearly overrepresented in the police force, but also, the personal willingness of police officers to enforce and comply with the Corona measures could suffer in the long term.

Figure 3. Attitudes towards the Corona pandemic

The representation is based on the information provided by 2,323 persons. Source: own representation.

However, the information provided by the respondents on their personal handling of the Corona measures does not indicate this (Figure 3). In fact, the Saxon police employees reveal a much higher degree of willingness to adhere to the rules ("compliance") than their personal attitudes would suggest. Nearly 80 percent of the respondents found it to be important to comply with the Corona measures themselves, while just 6 percent stated the opposite. Furthermore, a total of just under 15 percent of police employees said it was "rather" or "not at all" a personal concern for them to help enforce the implementation

of Corona measures. For all the rest of the respondents, this task was "fully" (26 percent), "rather" (32 percent) or at least "partly" (23 percent) a personal concern. A large majority of respondents also had no sympathy for demonstrations against Corona measures.

All in all, these attitude distributions indicate a pronounced professional ethos in the Saxon police. Many critics of the measures even managed to separate their political attitudes from their official duties. Anything else would be a serious problem, of course, since police officers are always faced with the task of enforcing rules regardless of their attitudes towards them. It is good news that this does not seem to be significantly different for the case of the Corona measures, which can be regarded as one of the focal points of intense ideological and political controversy in times of increasing polarisation and intensification of social conflicts.

This observation draws attention to respondents' perceptions of and experiences with the societal impact of police measures (Figure 3). For example, police officers could certainly be troubled if they were given negative feedback from their social environment because of their profession. However, almost two-thirds of the respondents stated that they did "rather not", or "not at all", have to justify police measures in their private environment. Nevertheless, at least one-fifth of the respondents had found themselves in such a situation. Yet, the respondents showed much more uncertainty regarding the acceptance of the police measures by society as a whole: more than half of them could not identify a clear tendency with regard to the question of whether citizens do accept police actions to enforce the Corona measures. A good quarter even said that this was "rather not" or "not at all" the case.

At the time of the survey, not even one-fifth of all the Saxon police employees believed that their professional activities in connection with the pandemic response had the public's understanding. Although the vast majority of respondents had not had any negative experiences in this regard in their private lives, their overall assessment of the social acceptance of police actions was much more ambivalent. There are probably at least two reasons for this: Firstly, perspectives on society as a whole are not obtained from personal experience but from the media. It is well known that media reporting tends towards negativity and dramatisation (Bednarek & Caple 2017; Bell 1991) – and the portrayal of pandemic measures in 2020 was not exempt from this. Secondly, police officers naturally have to deal a lot with people who do not comply with rules and who consequently have little sympathy for rule-enforcing actors.

The overall picture of the responses to all these attitudinal questions reveals a wide variety of perspectives on the Corona pandemic in the Saxon police. The appropriateness of Corona measures and sanctions, the dangerousness of the virus, as well as the societal perceptions of police action in connection with the Corona measures, were all assessed

very differently throughout the organisation. However, employees of the Saxon police, significantly more often than the German population as a whole, found the Corona measures and sanctions went too far. Regardless of this, the vast majority of police employees was intrinsically motivated to comply with these rules themselves. Only a small minority found themselves in deep inner opposition to their own professional duty to enforce pandemic control measures in society. These findings give no indication of serious problems with regard to an erosion of the professional police ethos. Nevertheless, they point to a considerable potential for socio-political tensions and dissatisfaction within the organisation.

Three groups of attitudinal types: Interventionists, conformists and sceptics

At this point, it is plausible to hypothetise about different types of employees in the Saxon police force, differing meaningfully with regard to their attitudes towards the coronavirus and the handling of the Corona pandemic. Many of the individual findings are closely related to each other: Those who do not consider the coronavirus to be much more dangerous than a normal flu also often finds the media's portrayal of the virus' health risks to be exaggerated. Those who think it is important to comply with pandemic control measures have less sympathy for people who demonstrate against the existing measures. And those who are not concerned about an infection may very likely not appreciate severe pandemic containment measures either. In short, there are patterns in the responses of the employees that point to consistent patterns of attitudes.

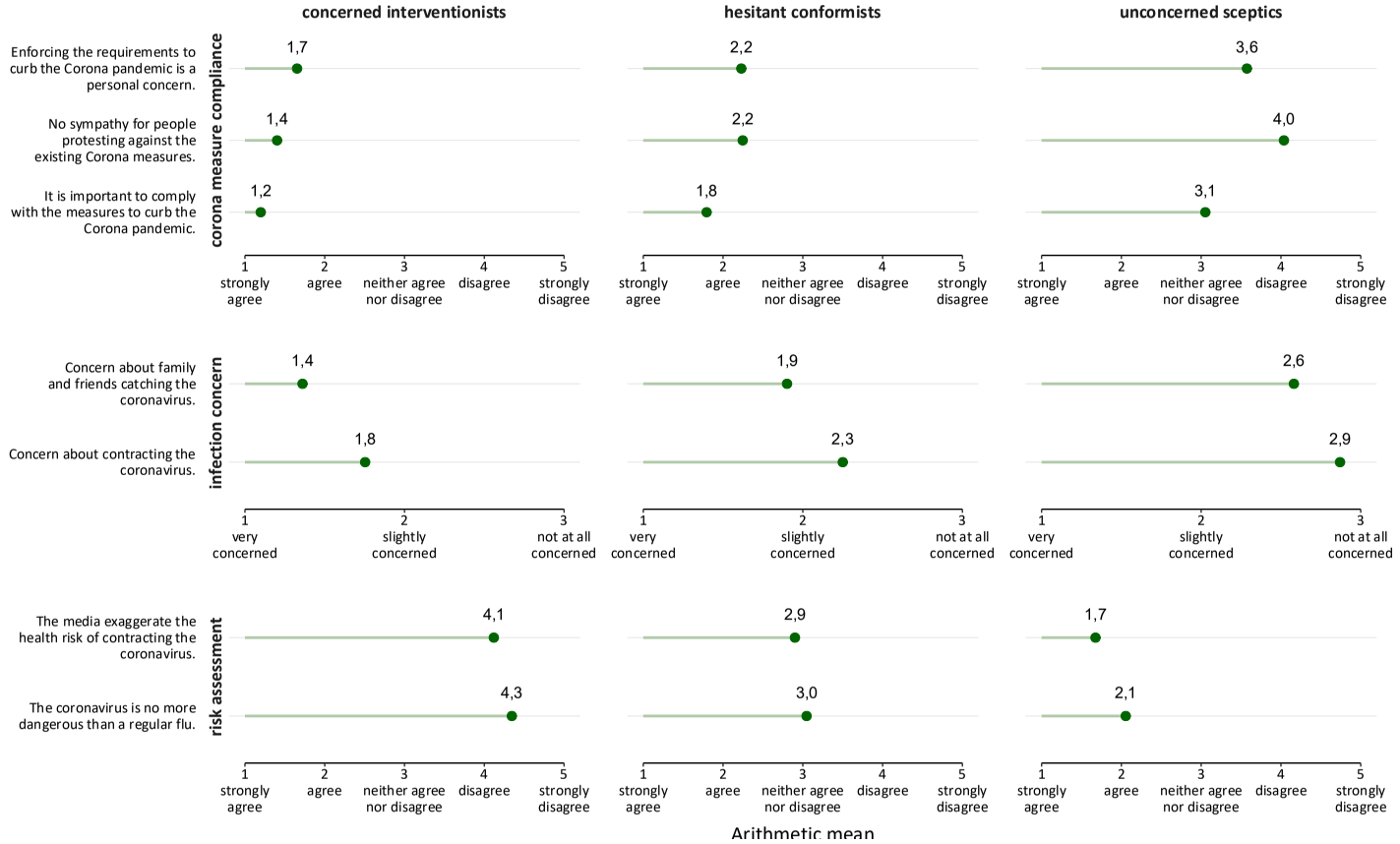
Such patterns were examined using cluster analysis, which aims to identify groups that differ as little as possible with regard to their attitudes. Specifically, we used a further development of the K-medoids or PAM algorithm (Kaufman & Rousseeuw 1990).[7] Because the answers to the survey items have an ordinal scale, Spearman's rank correlation coefficient was used for calculating distances between cases instead of the Euclidean distance measure. We determined the optimal number of clusters using the 'gap' statistic (Tibshirani et al. 2001) which favoured a cluster solution with three distinct groups.[8]

The cluster analysis was carried out on the basis of answers to a total of seven questions that were selected to capture three central components of attitudes towards the Corona pandemic: (1) the risk assessment regarding the dangerousness of the virus, (2) concerns about an infection, and (3) the intention to comply with the measures to combat the pandemic. Taken together, these three components paint a fairly accurate picture of a person's attitude towards the Corona pandemic.

7 The R-Package *cluster* was used for calculations.

8 The fit statistics for measuring the clustering quality can be obtained from the authors.

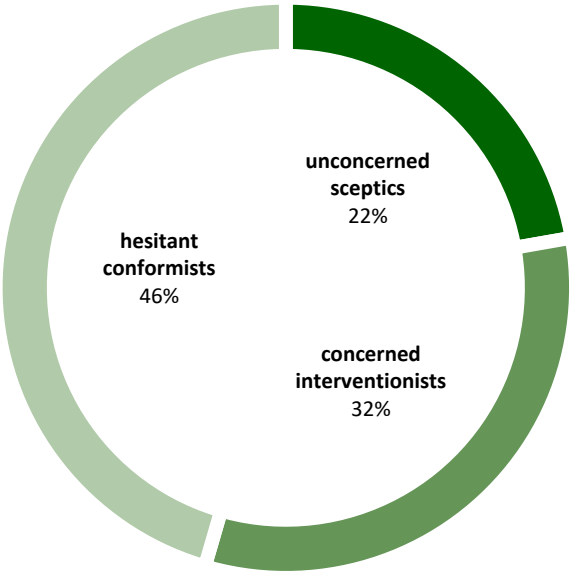
Figure 4. Cluster analysis of attitudinal types in the Saxon police force



The depiction is based on a cluster analysis using information provided by 1,759 respondents who answered these seven questions in full. Source: own representation.

Figure 4 shows the results of the cluster analysis based on the mean response tendency in these questions. Three different attitudinal types with relatively consistent patterns of attitudes can be distinguished: 'concerned interventionists', 'unconcerned sceptics' and 'hesitant conformists'.[9] Figure 5 provides information on the approximate frequency distribution of these three types among the staff of the Saxon police in the survey period from mid-October to mid-November 2020.

Figure 5. Frequencies of the attitudinal types



The illustration is based on information from 1,759 respondents. Source: own representation.

'***Concerned interventionists***' made up about one-third of the Saxon police workforce at that time. Employees of this type assess the danger of the coronavirus as very high and do not feel that the media exaggerates this danger. They are particularly concerned that people around them, or they themselves, could become infected with the virus. For concerned interventionists it is, therefore, not only very important to personally comply with the measures to contain the pandemic, but they are also personally motivated to enforce these measures in the performance of their duties. Employees of this type can hardly muster any understanding for protest rallies against the Corona measures.

Among this group of employees, clear support for an offensive political course in combating the pandemic is particularly widespread. The majority of concerned intervention-

9 These terms should not be understood as exhaustive descriptions of the types. Rather, they serve as semantic distinctions and focus on characteristic properties.

ists think that the Corona measures, and especially the sanctions for violations, do not go far enough. Hardly anyone amongst them feels that the measures and sanctions are too far-reaching. This is not surprising given their strong perception of danger and concerns about an infection. Furthermore, concerned interventionists inform themselves about the course of the Corona pandemic particularly frequently. They thereby rely on established sources of information for the most part, and use official government information websites to a greater extent than the other groups.

'***Unconcerned sceptics***' are of a completely different type. With a share of about one-fifth, they made up the smallest group within the Saxon police during the survey period. Compared to the other groups, employees of this type perceive the coronavirus as less dangerous and have a stronger impression that the threat is exaggerated in the media. They are also, on average, the least concerned about contagion and are much more sympathetic to people rallying against the Corona measures than the other groups. Enforcing these measures in the course of their professional activities tends not to be a personal concern for the unconcerned sceptics, and complying with these rules themselves, is most unimportant in this type compared to the others.

These perceptions and attitudes are typically accompanied by a pronounced critical attitude towards the Corona measures and sanctions: the vast majority of unconcerned sceptics feel that the measures and sanctions are too far-reaching; virtually no one in this group thinks they still don't go far enough. At the same time, sceptics do not completely refuse to enforce the rules in the performance of their duties and to comply with them personally. However, this does not seem to be motivated by an inner conviction or even fear of the virus. This is also reflected by the fact that unconcerned sceptics inform themselves about the Corona pandemic much less frequently than the other groups. Furthermore, they are the least likely to use a combination of public media, websites of public institutions and online services of established media providers. In contrast, the proportion of people using 'alternative media' such as social media, blogs and forums as sources of information is particularly high among unconcerned sceptics.

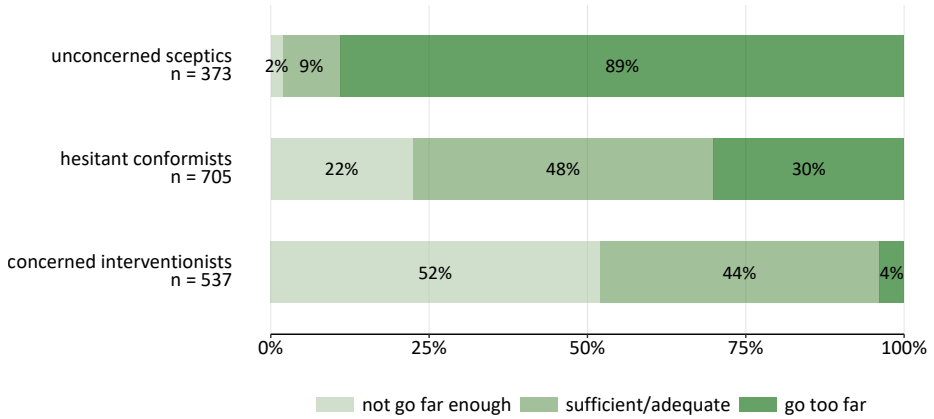
'Hesitant conformists' formed by far the largest group within the Saxon police in autumn 2020, making up almost half of the employees. Unlike the other two groups, they do not show a clear stance on how dangerous the virus is and whether this danger is exaggerated in the media. On average, they are certainly concerned about a possible infection with the coronavirus, but this concern is much less pronounced than among the concerned interventionists. In terms of their conformity in following and enforcing the measures to contain the Corona pandemic, this group is much closer to the interventionists than to the sceptics: conformists are, on average, quite motivated to follow the rules themselves as well as enforce them in their service. They also show little sympathy for people who take part in demonstration rallies against the measures.

This is particularly notable because the range of attitudes towards the Corona measures and sanctions is significantly wider among conformists than in the other groups: The measures go too far for just under a third of them, they don't go far enough for just under a quarter, and the remaining half consider the measures and sanctions to be just right. Thus, the approval of the status quo of Corona policies is not nearly as high as it is in the other attitudinal types. This ambivalent overall picture indicates that in general, unlike sceptics and interventionists, the group of hesitant conformists cannot or does not show a consistent position in the public controversy around this topic, while still adhering to the applicable rules to contain the pandemic.

This comparative characterization of the three groups should not serve as a template for stereotypical thinking and clichéd generalisations. There is a considerable degree of diversity within the groups. Group delimitations and descriptions are made using differences between means and distribution patterns, not by grouping respondents with completely identical characteristics. Nevertheless, all three attitudinal types have specific characteristics that make them distinguishable from each other. In order to obtain an overall picture of the respective characteristics and differences, it is therefore worthwhile to take a further comparative look at the group-specific manifestations of various characteristics.

Figure 6. Assessment of the Corona measures by attitudinal types

"All in all, are the current Corona measures in Saxony/Germany sufficient/adequate, do they go too far or do they not go far enough?"



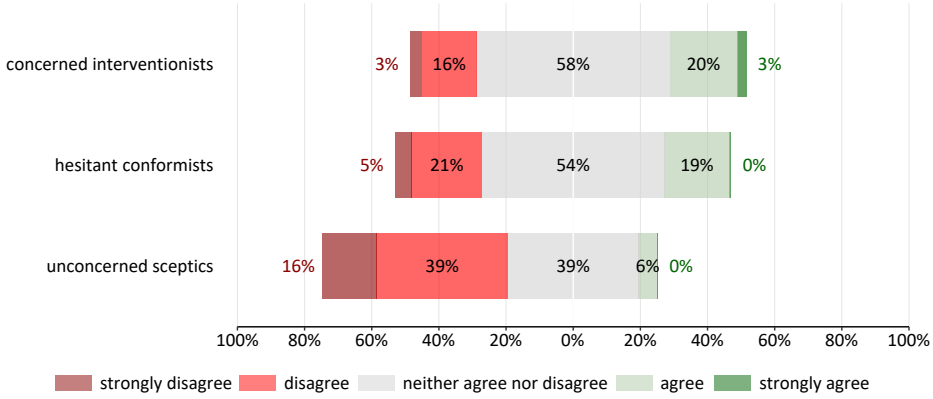
The illustration is based on the data of 1,601 respondents. Source: own representation.

Interventionists, conformists and sceptics show meaningful differences also in other attitudes and perceptions. As described above, the three groups show pronounced and

plausible differences in terms of their assessments of the Corona measures (see Figure 6). Similar differences can be found in the respondents' assessments of how enforcing Corona measures impacts the police's image within the public. Only about one in five of the conformists and interventionists stated that they had to justify the police's role in tackling the pandemic in their private lives in recent months. Among sceptics, however, almost one in three saw themselves under such a pressure to justify. Furthermore, unlike the other two groups, the majority of sceptics had the impression that the police measures do not obtain the population's understanding (Figure 7).

Figure 7. Assessment of the public understanding for police action by attitudinal types

"From my point of view, the police measures to enforce the Corona measures are met with understanding by the citizens."



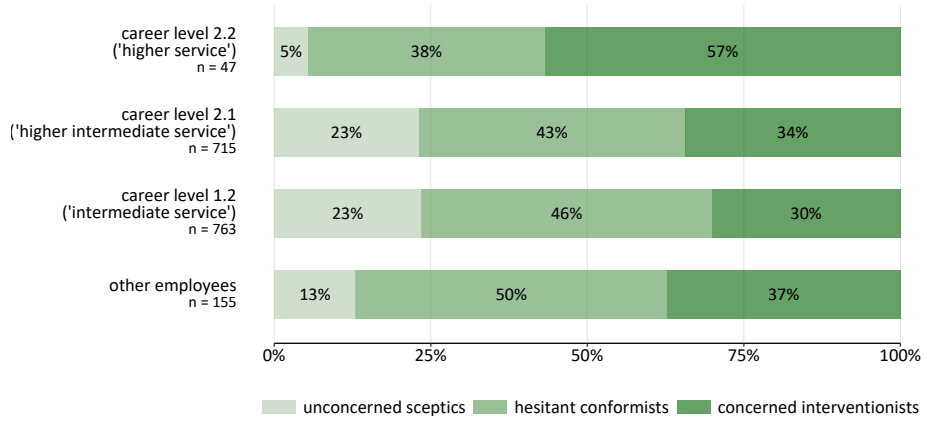
The illustration is based on the data of 1,679 respondents. Source: own representation.

The three attitudinal types show typical information behaviour as well. They clearly differ in how often they informed themselves about the pandemic, i.e. how much importance they attached to the topic. Half of the unconcerned sceptics informed themselves about the topic at least once a day during the survey period. Among the hesitant conformists, however, two-thirds did so, and among the concerned interventionists, even about 80 percent. Furthermore, while one in six sceptics stated that they informed themselves about the pandemic less frequently or never, almost no one in the other groups did so.

Comparing the respective preferred information sources provides insights into the different living environments of the three attitudinal types. Only just under one in five among the interventionists and conformists used social media to attain information about the Corona pandemic. Among the sceptics, however, no less than one-third resorted to these sources. And while alternative media such as internet blogs, forums and podcasts only served as a source of information for three to four percent of the other respondents,

almost one in six sceptics used them. Fittingly, public media and official government sources were much less important among sceptics than among interventionists and conformists during the survey period. Furthermore, sceptics obtained their information from private contacts more often than the others. Just as in the general public (see Scheufele & Tewksbury 2007), the information behaviour and media choice of police staff seems to fit and reinforce pre-existing political attitudes in a plausible manner – leading to distinct 'epistemic communities' especially among people with critical attitudes towards established media and scepticism towards mainstream politics (Fuchs 2010; Holt 2018; on alternative media framing of COVID-19 risks see Rooke 2021).

Figure 8. Distribution of the attitudinal types by career levels



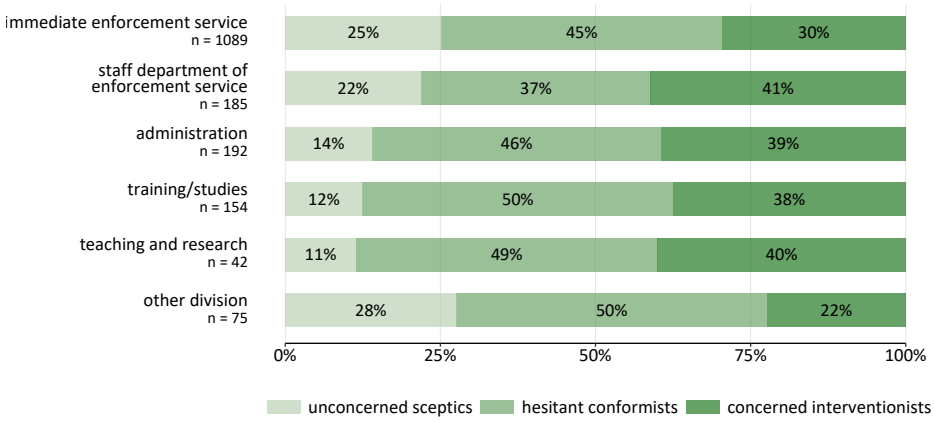
The illustration is based on the data of 1,680 respondents. Source: own representation.

The three attitudinal types are distributed differently among the three career levels in the Saxon police (Figure 8). The proportion of hesitant conformists in autumn 2020 was relatively similar on all career levels, with only slightly smaller shares on higher levels. For the other two attitudinal types, the differences were much more dramatic. Concerned interventionists not only made up the majority on the highest career level with just under 60 percent, but they were also represented there almost twice as often as on the other two career levels. On the other hand, only one out of twenty members of the highest career level was an unconcerned sceptic. In the other two groups, almost one in four belonged to this type of attitude.

The distribution in different divisions of the Saxon police (Figure 9) suggests that other factors play a role as well. The overall pattern can be summarised as follows: The more the employees are practically involved in the actual implementation of applicable rules (and

thus also of Corona measures), the larger the proportion of unconcerned sceptics among them. And the further away the respondents' area of operation is from the fulfilment of these tasks, the greater the proportion of concerned interventionists. Therefore, concrete experiences in connection with the enforcement of the pandemic response could be responsible for the differences between the employee and career groups – such as internal moral conflicts, a lack of acceptance on the side of the citizens or practical problems in the implementation of Corona measures 'in the street'.

Figure 9. Distribution of attitudinal types in different divisions of the Saxon police



The illustration is based on the data of 1,737 respondents. Source: own representation.

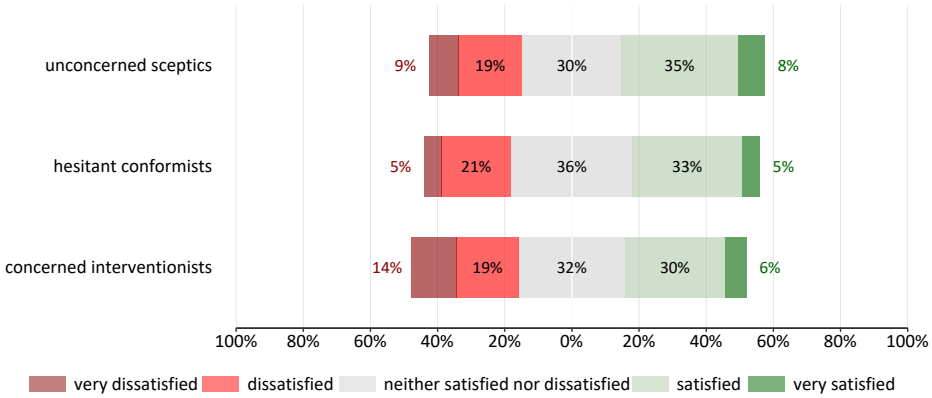
In sum, our study has revealed three distinctive attitudinal types in the Saxon police force: concerned interventionists, hesitant conformists and unconcerned sceptics differ markedly in terms of their concerns about a contagion with the coronavirus, their perception of its dangerousness, and their attitudes towards following and enforcing Corona rules. Furthermore, these types vary with regards to various other attitudes toward the pandemic as well as their information behaviour, and it is not far-fetched to assume that these patterns of attitudes are also linked to other ideological views. In different areas of the Saxon police, the three types occur in different proportions, whereby on 'upper' levels the Corona pandemic is on the average taken much more seriously than 'below', at the level of the pandemic response's immediate enforcement.

Exercising police service: Attitudinal types, leadership satisfaction and mental stress

Since interventionists, conformists and sceptics are characterised by specific patterns of attitudes not only towards the pandemic itself, it is reasonable to suspect that the three

types experience and assess their everyday police work during the Corona crisis quite differently. Therefore, it might be instructive to conclude with a brief comparative look at leadership satisfaction as well as mental stress in the performance of duty.

Figure 10. Satisfaction with leadership performance of superiors by attitudinal type



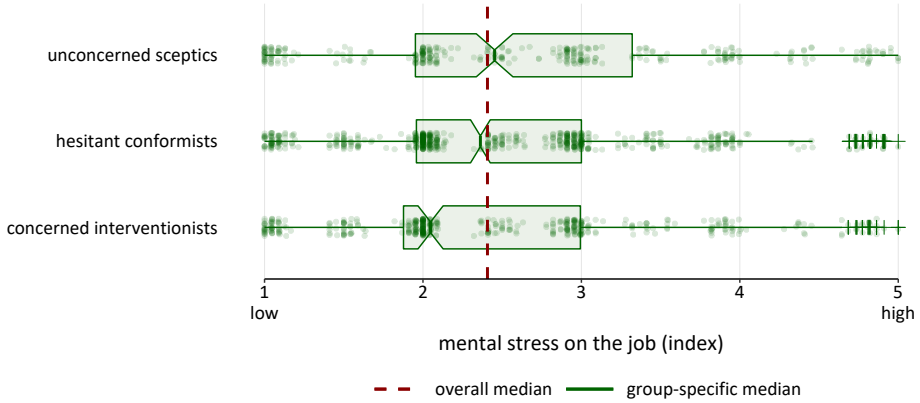
The illustration is based on the data of 1,636 respondents. Source: own representation.

The differences in the respondents' assessments of their supervisors' leadership performance during the spring 2020 lockdown are small but reveal a remarkable pattern (Figure 10). Among concerned interventionists, the proportion of those who were satisfied with their supervisors' leadership performance was the highest compared to the other two types. The average satisfaction of hesitant conformists was almost as high as that of the interventionists. However, the conformists were the least likely to be explicitly dissatisfied while showing the highest proportion of those who were neither satisfied nor dissatisfied. Unconcerned sceptics showed the least satisfaction with the leadership performance of their superiors with a particularly high rate of "very dissatisfied". All this must be seen before the background of the situation in spring 2020, when the pandemic and political situation often changed quite dramatically and unforeseeably, and as police forces still had to find a viable course of action.

These overall pictures point to a certain polarisation of perspectives between the three attitudinal types. While hesitant conformists seem willing to accept more ambiguity and unpredictability, the groups with distinctive profiles of political attitude – namely interventionists and sceptics – seem to prefer a clearer course. The dilemma here, of course, is that they can't both be pleased at the same time. But it should be possible to address their respective expectations and assessment horizons in leadership communication: for example, wishes for tougher action in the case of the interventionists, doubts about the

sense and benefit of the measures in the case of sceptics. All in all, the unconcerned sceptics type is likely to pose the greatest challenge of all the three groups in this regard.

Figure 11. Mental stress by attitudinal types



The illustration shows an index of the combined answers to the following two questions: "I find the performance of my official duties ... particularly strenuous / ... particularly stressful". (Response options: strongly disagree, disagree, neither agree nor disagree, agree, strongly agree). Source: own representation.

The differences in mental stress in the performance of official duties between the three attitudinal types are also not particularly significant (Figure 11).[10] However, the pattern is again quite illuminating. Contrary to plausible expectations, the average level of mental stress was not particularly high among those who had a pronounced perception of dangerousness and great concerns about contagion with regard to the coronavirus. The opposite is the case: mental stress was lowest among the concerned interventionists. Apparently, the clear conviction to be part of an important and necessary endeavour, e.g. implementing measures to contain the pandemic, more than outweighs their mental stress caused by fears and worries.

This interpretation is also supported by the fact that unconcerned sceptics showed the comparatively highest average mental stress level, also reflected in the lowest average confidence to act in service (Meißelbach et al. 2021, 57f.) Thus, the sceptics' low perception of danger and worries about contagion do not seem to have made their daily work easier in the first year of the pandemic. Conversely, the problem behind their rather high stress level could be the phenomenon of cognitive dissonance (Festinger 1957): Unconcerned sceptics are confronted with the problem that the performance of their duties re-

10 Mental stress was measured as one component of confidence to act based on an operationalisation by Rau (1996). The ranking of the three groups in the second component of activity-related confidence to act was similar, but with less pronounced differences.

quires actions that conflict particularly often and particularly strongly with their personal convictions. The sceptics type is, therefore, not the only group that presents the police leadership with particularly great challenges — their police work during the Corona pandemic was also relatively mentally challenging for themselves.

The hesitant conformists, who made up almost half of the police force and were thus the largest group at the time of the survey, are again more similar to the sceptics than to the interventionists: they showed a degree of mental stress that was hardly lower than that of the sceptics. Their ambivalent standpoints on the appropriate way to deal with the pandemic obviously did not make it any easier for them to navigate through their daily work. The most conspicuous group is clearly the interventionists: In this third of the Saxon police employees, a pronounced perception of danger and a comprehensive will to implement measures to combat the pandemic were combined with a particularly low level of mental stress in the performance of their duties.

The overall picture shows plausible differences between the three attitudinal types in the Saxon police force: Among concerned interventionists, leadership satisfaction is highest and mental stress is lowest. Unconcerned sceptics, on the other hand, have the greatest difficulties in the performance of duty. This difference is likely to be quite momentous in everyday work routines, especially with regard to group dynamics in teams and leadership communication. However, the differences between such politically diverse groups are not nearly as great as one would intuitively expect. This in turn makes two things clear: firstly, mental stress and leadership satisfaction of employees seem to depend much less on individual attitudes than on service-related factors such as actual leadership performance and satisfaction with the police as a whole (see Meißelbach et al. 2021, p. 27ff). And secondly, the small group differences again point to the fact that apparently large parts of the Saxon police are united by a common professional ethos, even across political lines of conflict. This is, indeed, good news in times of growing polarization and deepening societal conflicts.

Outlook: Diversity of attitudes as an opportunity and a challenge

This study aimed to gain insights into police employees' attitudes and perspectives on the Corona pandemic and the related containment measures. The analysis was carried out based on data from an employee survey of the police force in the German state of Saxony in autumn 2020.

The main finding is that the Saxon police is not an ideologically homogeneous organisation. Concrete evidence for that was presented for the case of issues concerning the Corona pandemic. But several findings indicate that the different perspectives in the Sax-

on police are connected with underlying patterns of general socio-political perceptions and attitudes. Some of these patterns may differ in their specific form from those of the population as a whole. In essence, however, the opinions among members of the Saxon police force seem to be an echo of the polarisation and diversity of viewpoints in public debates about the Corona pandemic and other relevant topics in Germany. This is particularly true for East Germany, where more than thirty years after the fall of the Berlin Wall a significant part of the population is highly sceptical about modern democracy and the political elites (Pickel & Pickel 2022).

Regarding the Corona issue, three attitudinal types can be found in the Saxon police: 'Hesitant conformists' tend to waver in their assessment of the situation but are nevertheless willing to make the sacrifices demanded of them in the context of pandemic control. This majority is situated between two groups with opposing views on the topic, leaning more towards the direction of the 'concerned interventionists', who are highly alarmed about the coronavirus and are, therefore, clear advocates of a strict and far-reaching pandemic containment policy. The third group of 'unconcerned sceptics' is characterized by a low danger assessment and critical perspectives of strict Corona measures as well as an, in their view, exaggerated media coverage. Compared to the two other groups, they have a pronouncedly different media diet, relying much more on alternative media and private networks, and a higher level of reported mental stress in the performance of their duty.

This diversity should not necessarily be seen as a problem. It has at least two advantages. Firstly, pluralism of perspectives and opinions opens up possibilities for institutional learning. It forces an organisation to deal with uncomfortable views and unwelcome facts. Secondly, ideological diversity encourages the police to continuously practise a lively culture of democratic debate and cultivate a climate of mutual tolerance. For this reason, the existence of two groups of people with opposing perspectives on the Corona pandemic confronting each other in the Saxon police force should not be seen as a negative symptom per se. This is especially true since the majority in between demonstrates a need to hear plausible arguments from both sides weighed against each other in a differentiated manner.

The majority of Saxon police employees are also united by a high level of professional ethics and a clear commitment to their duty. Although the measures themselves and their political assessment have been drastic at times, only a few question the police's task of enforcing the legal regulations to contain the pandemic. Even among unconcerned sceptics who clearly doubt the sense and appropriateness of such severe restrictions, only a minority is not at all personally motivated to enforce the Corona measures as part of their official duties. Conversely, even in the case of such a topic that is a focal point of fierce societal polarisation, police employees have so far succeeded in doing what they

routinely have to do anyway: differentiate between the private freedom of opinion of responsible citizens and the professional mandate of employees of the executive.

Of course, ideological diversity in such a controversial topic also poses challenges to a police organisation. Because the Corona pandemic has a strong impact on everyday work, conflicts about the appropriateness of pandemic measures and the role of the police in their enforcement are almost inevitable. Because different attitudes and behaviours are also associated with different degrees of concern about contagion and risk perception, such conflicts carry the potential to become very fundamental and put a lot of mental stress on those involved. On the one hand, this can cause negative group dynamics in ideologically diverse teams and ultimately reduce the organisation's ability to act. On the other hand, it can lead to very difficult situations between superiors and subordinates: Some staff members with great concerns about the pandemic suffer under superiors who attach little importance to hygiene rules – and vice versa. Therefore, a central challenge in everyday work will be to maintain professional and collegial cooperation despite very different personal views.[11]

Because the different patterns of attitudes are not evenly distributed across the career levels, there is also a risk of systematic communication difficulties, especially between higher management levels and the personnel working in the immediate enforcement service. There are almost twice as many concerned interventionists in the highest career level as in the other two groups – and almost six times fewer unconcerned sceptics. As in other parts of society, there is a potential of a solidification of increasingly divergent lifeworlds and ideological world views, thus jeopardizing constructive dialogue and a professional ethos supported by a sense of community. To counter this problem, senior executives need to be willing to deal with diversity of opinion open-mindedly and to respond with well-considered leadership communication. A culture of open discussion is more likely to be successful than patronizing appeals or uncontextualised service instructions.

This is all the more true because it is precisely employees with very pointed perceptions and opinions that pose challenges not only for the Saxon police, but for executive organisations in democratic societies as a whole. At the time of the survey, about a quarter of the Saxon police force doubted the particular dangerousness of the coronavirus and therefore rejected the measures to contain it. This is likely to be reflected not only in reduced motivation to work and a low willingness to be vaccinated. Finding such attitude patterns in the executive branch of government, of all people, also provides fertile ground for negative media coverage, critical public debate and a loss of trust in the police.

11 Hints on these social dynamics were found in free text comments given by many respondents at the end of the survey (see Meißelbach et al. 2021: 59 f.).

This situation poses difficult demands and great expectations onto leadership communication in the police force of Saxony. Concerned interventionists will be easily motivated to conscientiously enforce the pandemic containment policies. While on the one hand, the reference to the common good should be appealing to many of them, on the other hand, they also want their employers to act in a way that is geared towards infection control and crisis management for mere personal reasons. Thus, organisational failures in this field of action are a source of frustration and discomfort for them. However, such an approach in leadership communication might trigger defensive reflexes especially among unconcerned sceptics. For those employees who are critical of the Corona policy, it is precisely the enforcement of the measures that holds a great potential for frustration, and the cognitive dissonance between personal views and official duties can become a real mental burden for them. Among hesitant conformists, in turn, quite a few might probably feel that they are 'sitting on the fence' and therefore would welcome opportunities to gain orientation out of reasonable and differentiated discourses.

In such a situation, differentiated leadership communication and responsible action are needed to likewise 'take along' different attitudinal types in the workforce. This is a challenge not only for top management but also for middle and lower-level supervisors – and it will not go away with the end of the Corona pandemic. The implications of the presented findings ought to be applicable to other political and geographical contexts. Especially regarding highly politicised and contested topics, it might be necessary to approach different types of police employees, each with their own specific perceptions, attitudes and motivations, in a way that is both ideologically balanced and comprehensive in terms of leadership and clarity. Setting up the workforce and especially management personnel for such tasks in future times of crisis or politically tense situations will remain an important task. If such target group-adequate leadership communication fails repeatedly, it can lead to growing dissatisfaction among the staff – with corresponding consequences for the quality of the fulfilment of police tasks.

One possible reaction to this situation would be to launch broad campaigns and open discussion formats. Those would not only provide channels for the distribution of expert knowledge and leadership perspectives throughout the organisation, thus growing orientation and transparency, but it would also open up opportunities for critical questions and controversial debates. On the one hand, critical groups of employees (like the 'unconcerned sceptics' found here) would feel that their respective assessments of the situation were being taken seriously, treated with respect and not simply treated with contempt. This would be a desirable step forward from many socio-political debates from a perspective of democratic theory. On the other hand, such formats would also allow the participants to engage with the ambiguities and pitfalls of standpoints that seem unquestionably true or morally right to them. For example, concerned interventionists might be sensitised to goal conflicts and ethical dilemmas in the political handling of the

Corona pandemic, which may be more obvious to unconcerned sceptics and hesitant conformists – and vice versa. Such intra-organisational exchange will not be belated even after the 'hot phase' of this Corona crisis. On the contrary: with some distance to immediate trigger events, even better chances may open up to conduct controversial debates on the police's role in larger socio-political contexts.

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The Western Balkan Organised Crime at European Union: The Albanian Mafia - does it pose a real threat?

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Abstract
This article deals with the research question of whether Albanian-speaking organised crime poses a real threat to the security of the European Union (EU). We analyse the danger of Albanian-speaking criminal organisations in the Balkans, Europe and elsewhere. Based on a wide range of criminal investigations, this innovative report looks forward to providing up-to-date data on police operations carried out by Europol and making the fight against these criminal groups' relevant scenes visible.
The methodology is based on two aspects. On the one hand, the study of the essential characteristics of these criminal groups is based on the latest studies made public in the academic sector. This will help us to understand criminal networks in detail, overlapping the core criminal activities and markets. On the other hand, the key police operations and international actions carried out during this period were studied based on Europol's open access reports involving *Europol News Press Release*. The current situation was established on the evidence released from 2018 to 2021.
Analysis of these data has revealed the volume and scale of operations. Also, the geographical scope of the main criminal activities of the Balkan Organisations, especially the Albanian Mafia. All this shows that we are dealing with unique criminal organisations. This is so not only because of their sui generis characteristics but also because of their criminal activity, which makes them extremely difficult to combat by law enforcement agencies.

Keywords: Organised Crime, Balkan, Albanian Mafia, European Union, Europol.

Introduction

Speaking the situation of Organised Crime in the European Union highlights the considerable level of criminal activities during the last few years. Serious and organised crime remains a main EU security threat (Europol, 2021a). This report proposes to show the links between the Western Balkans organised groups in general, and more specifically the Albanian Mafia, based on the security at European Union and try to answer the following research question: Is the Albanian-speaking organised crime threatening the EU? To do this, we need first to understand the full spectrum of criminal activities, their *modus operandi*, their roots, links and so on and to identify the key criminal issues, such as facilitators, intermediaries or guarantors. To defeat it, a comprehensive approach to this phenomenon will provide better knowledge about the Balkan criminal landscape.

The article is divided into three clearly defined sections. Firstly, the methodology used to collect the data is based on this research. Secondly, criminal organisations in the Balkans set out the characteristics that make these groups unique. For this purpose, previous studies on the subject have been considered, as well as institutional reports and academic papers, to contextualise the reader. Finally, the focus is placed on the Albanian Mafia precisely. In this part, and to answer the above question, we analyse the operations carried out by Europol and published in *Europol News Press Release*. To analyse the data obtained, six key points have been considered. They are shown in graphs: (1) the number of police operations carried out, (2) the type of criminal activity, (3) police operations by type of drug trafficking, (4) the countries involved in the operations, (5) the number of Albanian Mafia member's arrested and (6) the number of police operations carried out against the different criminal groups which are the subject of this investigation.

The limit of the scope of the research is the actual number of police operations carried out against criminal organisations in the Balkans, including the Albanian Mafia, during the period in focus. The data presented in this investigation should be taken with caution, bearing in mind the frames of this work. However, we intend to lay the groundwork for a much broader study in the future.

Methodology

The research carried out in this article has been approached from two perspectives. Firstly, we present a general theoretical framework of criminal organisations in the Balkans, which helps us to contextualise the subject under study. It is at this point that, through previous research by relevant authors such as Lamallari & Zhilla (2015, 2016), Rama (2021) and Saggers (2019), among others, the aim is to deepen the specific characteristics that make both Balkan groups and Albanian Mafia into a unique group of criminal organi-

sations. To highlight this point, the dismantling of one of the largest Albanian criminal organisations in the world, *Kompania Bello*, is exposed.

Secondly, having explained the general characteristics of both, and to answer the question raised in the title, the police operations carried out by Europol during the years 2018-2021 have been analysed and published in *Europol News Press Release*. From all this news, a few key points have been extracted, presented in graphical form, showing the relevance of the threat posing the Balkans organised criminal groups, especially the Albanian Mafia, to the European Union as a whole.

The limitations of our research lie in the fact that only the data of the news published in *Europol News Press Release* have been analysed, so we are aware of the police operations carried out during these years, which we have not had access to in details, and which would extend the scope of this study. This leaves the door open for further research on the subject.

Analysis

Part One: The Organised Crime in the Western Balkans

In this first part of the research, we start to provide an overview of the essential characteristics of criminal organisations in the Balkans. This will allow us to understand the Albanian Mafia better. Secondly, we will briefly analyse the main illegal markets of these organisations based on the several police operations carried out by Europol between 2018-2021.

Crime and perpetrators in the Balkans

The Balkans have constantly been forming a complex framework about ethnicity, religion, geographical crossroads, social factors, historical regional and political grievances among countries, wars, terrorism and finally, when the former Yugoslavia collapsed, this brought an addition of a booming breeding ground to develop criminal activities at southwest European region. If these factors are combined, we will find one of the most critical issues about these states' future entrance into the European Union. The lack of a strong democracy and legal values added to the weakness of political institutions have made a perfect storm for criminals and their activities (UNODC, 2020).

Globalisation has contributed to a more connected and less safe world, and the Balkans' criminal groups have taken advantage of this to move from a regional threat to a global one. The Balkans have become one of the most significant criminal hubs of international organised crime. Nowadays, the known Balkan Cartel and mainly Albanian-speaking Mafia organisations not only have been constituted as a primary drug gate to European Union but also have created an essential criminal business model which threatens to monopolise all drug trafficking markets to flood Europe.

One of the key factors to understanding the essential characteristics of these groups can be found in the words of Krasniqi (2016):

"*Organised crime in the Balkans could not have developed to this point without establishing networking and cooperation between regional groups belonging to organised crime. These groups, becoming increasingly criminally sophisticated all over the Balkans, are characterised by their ability to work together and adapt to any new social circumstances well enough to achieve their criminal goals*" (p.212).

Taking these words as a beginning point, the most relevant characteristics are *cooperation, networking* and *adapting*. These three points give us the key to understanding how these criminal groups become a global threat. Conversely, the current trends, most of the Balkan criminal groups, named as a family or place, evolved familiar mates or different sibling grades, even other people from a shared community. This consists of a hierarchical Mafia-style organisation. The larger groups have shown a predilection for a networked structure in contrast to small or medium which are more hierarchical. They usually operate around main hotspots or transit corridors like ports, crossroads, border crossings or airports (UNODC, 2020).

The criminal cartels of the Balkans are formed by more entrepreneurs than only criminals, developing an unbeatable business model, taking risks, and developing new business opportunities focused on adapting and innovating the criminal markets (Kemp, 2020). One of the most relevant points related to their structure is the second generation (usually forming a diaspora) of younger gangers who are completely tech and device savvies, using proficient computer skills, languages, and communications such as satellites phones or Voice over Internet Protocols (VoIP) among others, which makes them a potential law enforcement's adversary. All these characteristics allow the new generation of criminals to become under the law's radar, which facilitates their criminal activities on the one hand and makes police work more difficult on the other (Kemp, 2020).

Current Situation: An Overview of Police Operations 2018-2021

The following section briefly analyses the developments in the activity of organised crime groups in the Balkans between 2018 and 2021, considering Europol's newsletters (Europol, 2018a; Europol, 2018c; Europol, 2019d; Europol, 2020b; Europol, 2020d; Europol, 2021d; Europol, 2021e). We appreciate that almost half of them, 40.45% joint operations, have been against the Western Balkan organised crime network known as the Balkan Cartel. From the international security point of view, all these joint police operations have been involved not only in national law enforcement authorities and departments but also in international security agencies such as Europol, Frontex, Interpol, and Eurojust, among others. It is essential to highlight the role played by non-EU countries (in the Balkans, the Americas, and Asia) and the US Drug Enforcement Administration (DEA) in these operations, showing us the complexity of the criminal activities spread around the globe.

It can be observed the development of police operations against different groups of organised crime originated in the Balkans during the years 2018 and 2021:

— Firstly, in 2018 there were five police operations directed against these criminal groups. The most relevant operations were Operation KOLUMBI (Europol, 2018c), NANA (Europol, 2018a) and ARME72 (Europol, 2018c).
— Secondly, in 2019, two operations were carried out; the most relevant was Operation FAMILIA (Europol, 2019d).
— Thirdly, in 2020, two international operations were against Balkan organised criminal cartels (Europol, 2020b; Europol, 2020d).
— Finally, in 2021 the operations carried out two, in this case, dealt a blow to several criminal cartels during the Joint Action Days, JAD (Europol, 2021d; Europol, 2021e).

Law enforcement agencies worldwide have tackled this global threat thanks to continuous cooperation, intelligence sharing and performing joint operations (ten in four years) to capture high-value targets (HVT). The term originates from the military, explaining high-value targets as assets that an enemy commander requires to complete their mission successfully. The loss of high-value targets would be expected to seriously degrade essential enemy functions throughout the friendly commander's interest – specifies the Field Manual of the US Army (2010).

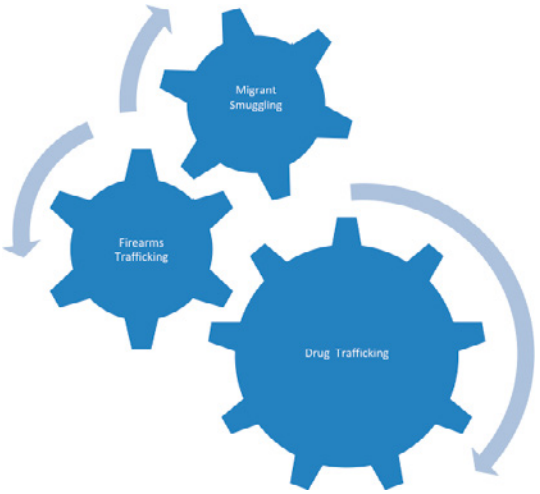
Europol transforms the terminology from the military to the law enforcement sciences explaining that:

> *"HVTs are the key enablers and facilitators of criminal processes. They are not limited to the obvious categories of leaders, organisers, brokers, coordinators, fencers or large-scale money launderers. They can also be persons offering specialist expertise or access to crucial contacts or infrastructures such as technical experts, legal and financial advisors, or services providers"* (Europol, 2021a, p. 22).

Concretely between 2018 and 2021, five HVTs, including two kingpins (Mafia's *capo*) considered by Europol as two cartel leaders, have been arrested by law enforcement authorities (Europol, 2021d). Most of these operations are part of a broader European strategy developed by European Union law enforcement authorities inside the European Multidisciplinary Platform Against Criminal Threats (EMPACT).

By summarising these police news reports, the highest threat posed to societies by criminal issues were drug trafficking (mainly cocaine from South America to European Union), firearms trafficking and migrant smuggling. As far as these illegal activities are concerning this current report, we can state the following (UNODC & Europol, 2021):

Figure 1. Synergies between main criminal activities



It is well-known from *drug trafficking* that this is the primary source of income for the cartels (UNODC & Europol, 2021). The Balkans are one of the most prominent transits regions for all kinds of drugs, as we have been able to appreciate through police operations. During the analysed years, the authorities apprehended nearly six tons of drugs. Regarding the different types, the following issues are found:

— Heroin: Balkan routes are the hub of trafficking heroin from Afghanistan and Pakistan to European markets via Turkey (Kemp, 2020). It is important to note that heroin is also processed in the Balkans in smaller amounts. Still, there is no evidence of this trafficking currently at these Europol police operations between 2018-2021.
— Cannabis and Marijuana: Albania is the leading top producer and exporter of Cannabis to the European Union. For example, the village of Lazaret, in southern Albania, is referred to by experts as *Marijuana Mecca* or Europe's cannabis capital (Kemp, 2017). Law enforcement seised 474 kg of marijuana (7.81%) and 719 kg of Cannabis (11.85%). Both have supposed nearly 20% of the whole drug trafficking period analysed.
— Cocaine: Currently, the most lucrative market for these groups is the cocaine trafficking from South America to Europe (UNODC & Europol, 2021; Bargent *et al.*, 2021), near 4 540 kg above 74.84 % of all drugs seised, thanks to the previous contacts created between cocaine cartels and Balkan cartels using the Italian Mafia relationships.

In addition, according to *firearms trafficking*, there are millions of weapons and explosives out of control in this region (Rama, 2021). Most of them have their origin in the Yugoslav wars. The smuggling of these weapons flows mainly to other criminal groups, such as motorbikes gangs from Nordic countries, Italian Mafias or even under terrorists' hands.

Brussels, Paris, Italy, Netherland, and Germany, among other European countries, collect the leading destination of these weapons and explosives. During the police operations led by Europol in these years (mainly during Joint Action Days-JAD[1]), it is observed that the authorities have seised a total of 1122 pieces of small firearms (pistols, machine guns and rifles, among others) (Europol, 2018c). It is relevant to notice that police could also find rocket launchers, hand grenades, detonators, and a high amount of ammunition, almost 4 482 bullets for small arms and light weapons (Europol, 2018c).

At this point, we must highlight the strong relationship between contract killing and the hitman phenomenon. The violent reputation which precedes criminals from the Balkan region is well known, being used as 'muscle' or 'foot soldiers' for many criminal gangs worldwide, especially in Europe. Such individuals were selected from a wide range of young unemployed people with a lack of future expectations and belonging to minor gangs working as thugs or assassins. Due to the legacy of the 1990s wars, the region is an invaluable source of former soldiers and paramilitaries who became unemployed (Global Initiative Against Transnational Organised Crime, 2019). They have developed specific skills to act as perfect hitmen (Rama, 2021) and repeatedly seek such challenges. If we add the great facility to acquire weapons and explosives from the local region, we will find a potential asset to carry out a professional assassination (Lamallari & Zhilla, 2015).

Finally, *migrant smuggling* is a well-known organised crime sector in the region. The Balkan Route became a priority transit path of aliens for multiple reasons circulating along with the crossing road between countries and continents. These individuals from several countries in Europe, Asia, Africa, and the Middle East belong to different ethnic, cultural, and religious groups. The humanitarian crisis means a point of beginning of a lucrative business, and there are more criminal groups obtaining large amounts of money from smuggling people through the Balkan's migrant routes across different countries to the European Union. One main issue related to this phenomenon is the use of these routes for *foreign fighter returnees* to come back to Europe. In 2018 the European Union Rule of Law Mission in Kosovo (EULEX) and Europol broke down the major organised criminal groups in an extensive cross-border operation (Europol, 2018b). Still, the topic remained the member states' law enforcement focus. However, this operational success provides evidence of the importance of law enforcement cooperation in Europe and elsewhere.

Considering the main countries involved in the cross-border crime committed by organised criminal groups in the Balkans, we can see that the threat is real. Their scope is global; their area of operation covers not only the Balkans and the EU member countries but also South America, Asia (with a focus on Hong Kong, Macao and Malaysia), and even Australia (Europol, 2019d).

1 "Joint Action Days (JADs) are cross-border law enforcement operations focusing on key crime priorities" (Europol, 2018e).

Part Two: The Albanian Mafia

In this part of the research, we first propose an overview of the Albanian Mafia's essential characteristics, making them unique. Let us take the example of dismantling *Kompania Bello* as a prototypical organisation and analyse several police operations carried out by Europol and its partner agencies.

General Overview

Security threats originating from the Balkans have significantly been affecting countries beyond the borders of the Balkan region and have a significant impact on the countries of the European Union. Our scope will be the Albanian-speaking organised criminals, also known as the Albanian Mafia. As mentioned before, the spread of these organised criminal groups has been influenced by several favouring reasons, such as geographical specificities, the political and economic situation in the Balkans still having roots in the consequences of the collapse of Yugoslavia, the high degree of unemployment, immigration waves to Europe (imported criminal experiences and foreign contacts) and support offered by members of the Albanian diaspora (Lamallari & Zhilla, 2015). These organised criminal groups have made a perfect storm to develop all kinds of criminal activities around the region, creating a complex criminal landscape that challenges law enforcement agencies. For identification purposes, Europol and other law enforcement agencies speak about Albanian-speaking groups, referring not only to citizens of Albania *strictu sensu* but also Albano-Kosovars and Albanese-speaking people of Montenegro.

Law enforcement agencies across the EU, including Europol, have noted in the beginning that these groups appear as *facilitators* and *service providers* (couriers, hitmen, or thugs) for other criminal groups. Even though these groups do not only appear this way, they could also often be part of a more comprehensive criminal network (Lamallari & Zhilla, 2015).

Europol has described the Albanian-organised criminal groups as Mafia-style organisations. According to Raufer's definition (2018):

> "*Mafia is a permanent secret society uniting a coalition of families bound by blood or marriage; it is closed, elaborate hierarchies and rules. The law of silence surrounded all and usually joined only by family or clan co-option*" (p. 62).

The Albanian Mafia has successfully combined traditional and modern elements of organised crime; they follow ancient patterns and updated ones in their business models. These groups are ruled by members of the family clans, called "*fis*", with strict internal rules of behaviour and loyalty to the clan. These clans are based on family blood ties (difficult to infiltrate) and marriage links. Their communications also have characteristics, such as coded language, dialects like *Gheg Albanian* and the so-called **code of silence** (Micha-

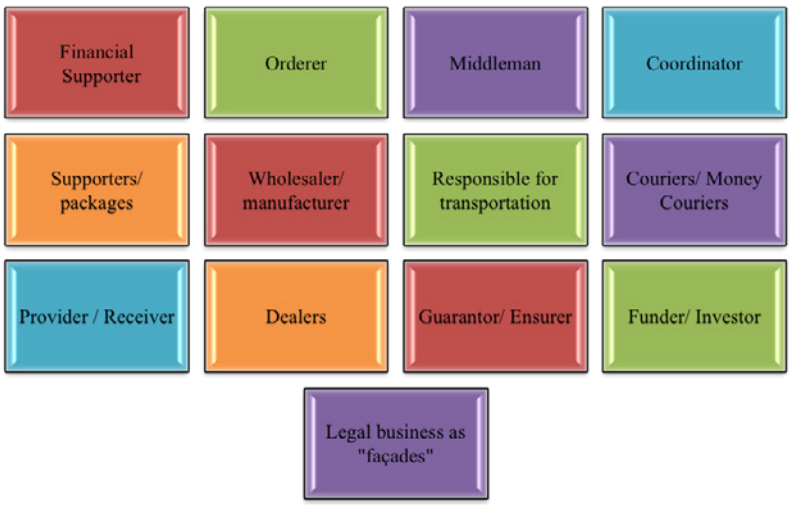
letos, 2007). The member's relationships often originate from their childhood, school, and neighbourhood, which ensures strong ties between them (Lamallari & Zhilla, 2015).

Although more flexible, the Albanian criminal groups follow a robust internal hierarchy to interact with other teams. They follow diverse interests in commodities and have recently developed a poly-criminal business model (dealing with drugs and firearms, and providing services as hitmen, for example), as Europol specified. Some members of organised criminal groups in the Balkans, especially the Albanese-speaking ones, are considered the former staff of intelligence services (*Sigurimi*[2]) or police officers and paramilitaries, with those elements remaining part of their character, despite changes over the years in the typology of criminal activity (Rama, 2021). Nevertheless, the Albanian-speaking Mafia organisations are considered one of the most violent criminal groups in the European Union (Lamallari & Zhilla, 2015; Rama, 2021).

It can be appreciated that the Albanian Mafia has shown an incredible capacity to develop highly complex international operations creating a vital outpost mainly in the European Union. One of its major successes is the great secrecy and high level of professionalism while operating abroad (Raufer, 2018).

According to our investigations, some individuals from the above-mentioned criminal networks could be identified according to their roles, and therefore they could be targets of prosecution (Lamallari & Zhilla, 2015):

Figure 2. Members of the Criminal Networks



2 Directorate of State Security of the People's Socialist Republic of Albania.

All these targets within criminal chains are important breaking points and could lead us to high-value targets to defeat the real threat. From our point of view, a clear connection between Albanian Mafia groups and State institutions exists and shows the actual scope of the threat. We are talking about the figure of the *guarantor*, formed by personnel from institutions, such as border police officials, law enforcement investigators, judges, and prosecutors, for instance (Lamallari & Zhilla, 2016), whose primary role is to guarantee that criminal business goes smoothly without any problem. Another relevant actor in the chain is the so-called *middleman*. This subject is a crucial element inside the criminal structure, mainly abroad, and is considered a perfect broker to contact people, saving both sides in an unlawful arrangement (Lamallari & Zhilla, 2016). Summarising this point, if law enforcement forces could discover and tackle one of these elements on the illegal chain, they would be breaking down and defeating some criminal organisations.

On top of that, Albanian-speaking Mafia networks are spreading worldwide, but their ties are incredibly dense in the European Union. A detailed awareness of these ties is a condition to understand how these regional groups have become an international high-level security threat to our societies.

Finally, the more relevant hotspots of international networks with constantly reported participation of Albanian criminal groups related to illicit markets of drug trafficking are as follows (Rama, 2021):

— *Cocaine*: *'Ndrangheta*, Camorra, Colombian, Dominican, Moroccan, and Spanish criminal groups;
— *Heroin*: Sicilian, Apulian, Tunisian and Moroccan criminal groups;
— *Cannabis*: Lazio, Apulian, Sicilian, Moroccan, Tunisian and Spanish groups.

Furthermore, another critical market in Europe is firearms trafficking, where the Italian organised criminal groups, primarily the *'Ndrangheta,* act as the Albanians' primary clients, as Europol indicated in 2011 (Europol, 2011, p. 38.). It is relevant here to expose that Belgium, Netherlands, Germany, France, Italy, Spain, the United Kingdom, Switzerland, and Germany are the main European countries where the Albanian-speaking Mafia maintains their dissemination networks and roots go deep inside the criminal underworld. The United States and Latin American countries are their main outposts outside Europe (Kemp, 2020).

The Kompania Bello: A Perfect Albanian Crime Syndicate[3]

During this period, where we have focused our investigation, the police operation LOS BLANCOS, in September 2020 coordinated by Europol, has involved more than ten

3 At the end of this investigation, according to sources consulted, *Kompania Bello* is reorganising its criminal structure in Ecuador and forming new alliances in Europe (Mistler-Ferguson, 2022).

countries, from Europe and outside, against the most dangerous and complex Albanian-speaking Mafia, named *Kompania Bello*. Briefly, we expose the main characteristic of this criminal organisation, which is relevant to the main aspects seen before, and the composition of Albanian criminal groups worldwide (Qyno, 2021; Europol, 2020c).

The criminal syndicate was led by Dritan Rexhepi (40), who was from Ecuador's prison managing one of the most complex illegal businesses. The *Kompania Bello* controlled the whole chain of drug trafficking, from departure to distribution, between South American drug cartels and Europe, concretely the ports of the Netherland and Belgium. The cocaine was delivered to Germany, Italy, and Albania from these points. Based on a solid hierarchy, the criminal group involved nearly fourteen Albanian criminal groups and recruited their members from the extended Albanian-speaking diaspora across European countries. Following this kind of Mafia-style organisation, the strict loyalty and the ability to intimidate others have created a strong sense of code of silence among all members (Michaletos, 2007).

Apart from that, we must focus on several capstone issues. First, during the investigation, the intelligence capabilities developed by the *Kompania* showed that the members of the groups exchanged information about police operations and criminal cases while being processed in the court as a strategic analysis focused on future illegal activities (Qyno, 2021). Secondly, the use of *guarantors* and bribing public officials at cargo ports. Thirdly, the payment system uses a Chinese organisation system (*feich'ien*) without carrying cash (Europol, 2020c). And finally, the more significant deals with South American drug cartels. One of them, Cesar Camilo Montenegro, called *Don Monti,* ruled Ecuadorian drug trafficking. And other cartels, in this case from Colombia, are known as Norte del Valle and Sinaloa's cartels from Mexico (Qyno, 2021).

Current Situation Between 2018-2021

The following statics are based on open source from Europol's News Press Release about the police operation leading across Europe and other countries, but Europol has participated and coordinated them between 2018 and 2021 following the same structure showed previously at Balkan's operations, offering specific statistics (Europol 2018d; Europol 2019a; Europol, 2019b; Europol, 2019c; Europol, 2019b; Europol, 2019b; Europol, 2020a; Europol, 2020c; Europol, 2020e; Europol, 2021b; Europol, 2021c).

To answer the question of whether the Albanian Mafia poses a threat to the EU, six key points of reference have been used against which we assess the data obtained:

Figure 3. Key Issues

Source: The author's drawing.

The following section will dissect these key factors by employing graphs. The data extracted from Europol's press releases will provide valuable information to assess the threat of the Albanian mafia in the European environment.

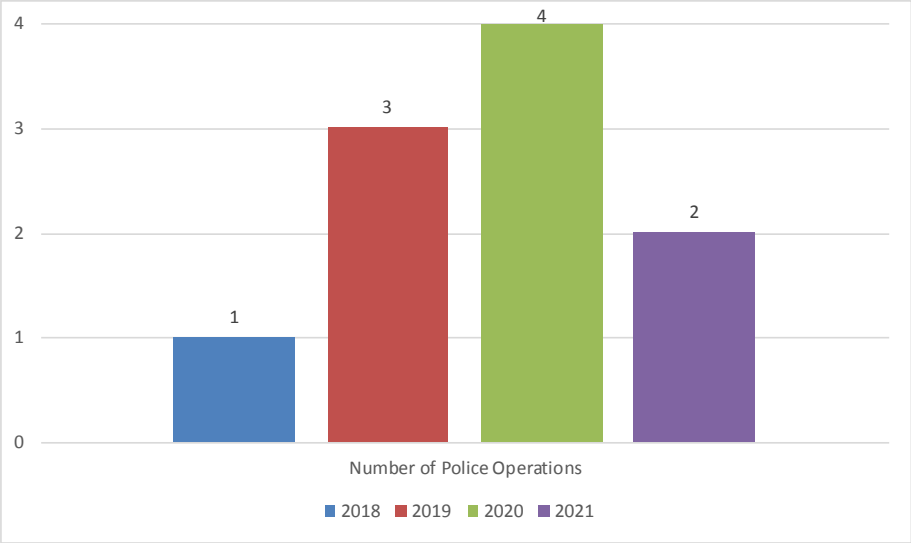
Statistics and Graphs

The first graph demonstrates the number of police operations carried out against Albanian-speaking organised crime during the period of this research.

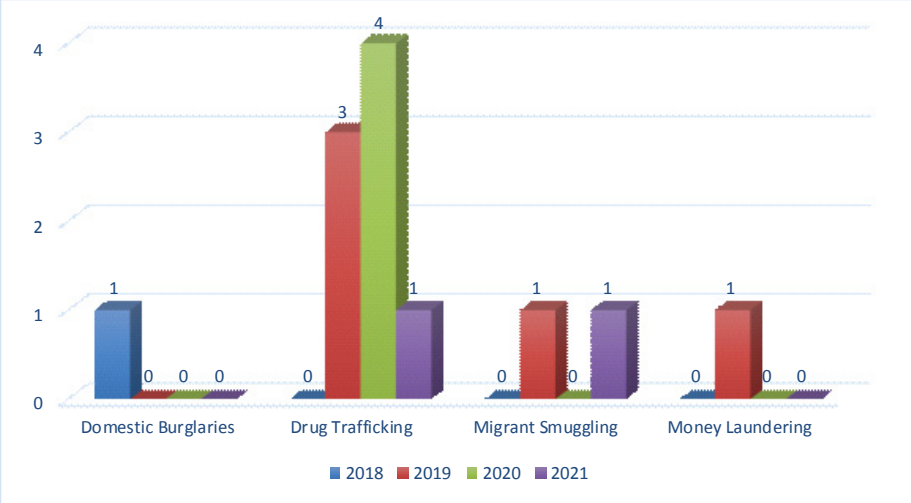
The most relevant information, which can be observed in graph 1, is the increasing police operations from 2018 until 2020 and the subsequent decrease in 2021. It seems that COVID-19 does not affect criminal activities. One of the main characteristics of the new organised criminal groups is their ability to be adapted to these specific circumstances, as the graph indicates.

In the second graph, the criminal activity is shown by the type committed by the Albanian Mafia groups. The most significant developing sector was drug trafficking between 2018-2021.

Graph 1. Number of Police Operations



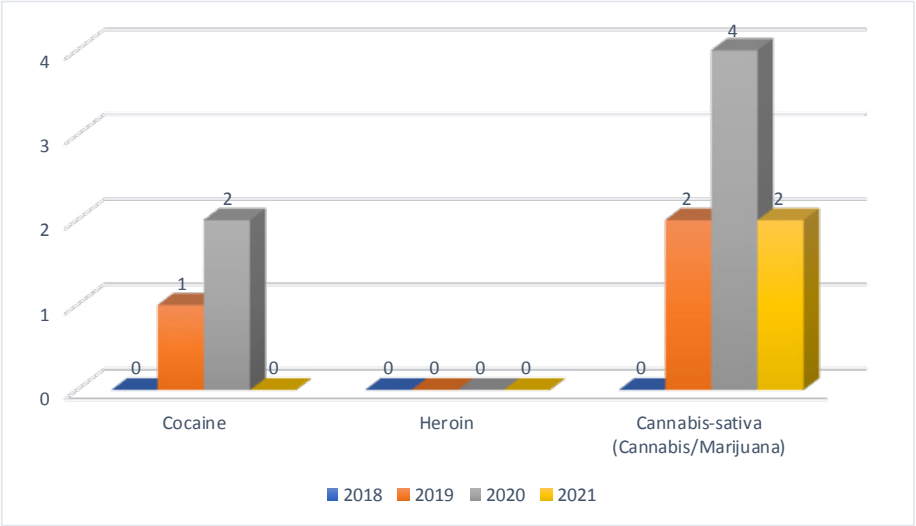
Graph 2. Type of Criminal Activities



Inside the entire scope of police operations led by Europol in these years, we noticed that the main criminal activity is drug trafficking, as seen in graph 2. In most studied cases, an additional crime to drug trafficking could be identified, such as money laundering and

migrant smuggling. The term poly-criminality is a business model in which the organised criminal group expands their crime portfolio, engaging other crime sectors simultaneously. The multiple illegal activities in the portfolio make the business model more robust and capable of resisting quick market changes. (Europol, 2017, p. 15) Once it has been established that the main criminal activity of the Albanian Mafia is drug trafficking, the third graph shows the number of police operations by type of narcotic substance carried out in this period:

Graph 3. Police Operations by Type of Drug Trafficking



In 2019 there were three operations carried out, while in 2020, there was an increase to a total of six, followed by a decrease in 2021 when just two such operations happened. Concerning the type of drug, three operations were carried out against cocaine trafficking and eight against cannabis-sativa (four related to cannabis and four against marijuana) trafficking too. Surprisingly, during the period under review, there have been no operations related to trafficking in opiates, such as heroin.

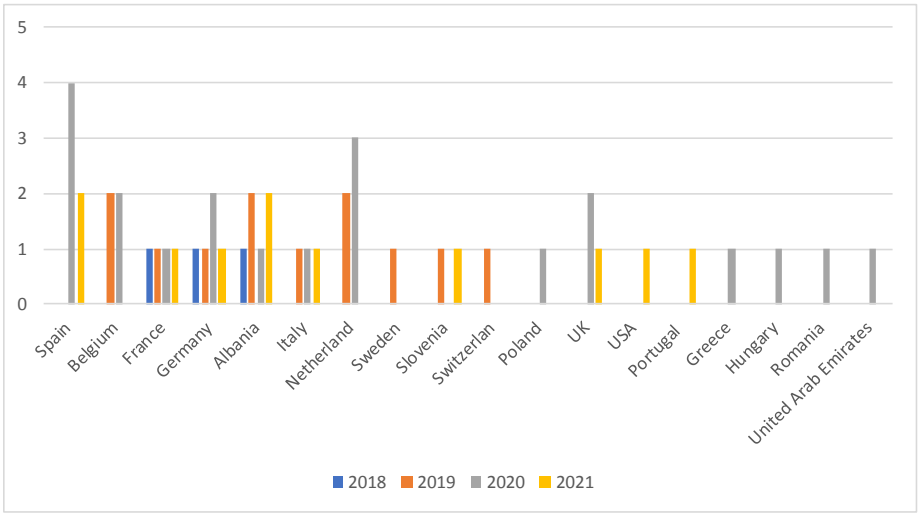
Following the data obtained in police operations related to drug trafficking (*Europol News Press Release,* 2018-2021), we can notice that the primary illegal substance is Cannabis Sativa and their derived products such as Marijuana (74 755 cannabis plants; 73 plantations; 3400 kg seised; and 280 kg of Marijuana seised), followed by cocaine (5 650 kg seised, mainly at *Kompania Bello*, during LOS BLANCOS operation, and operation GOLDFINGER too). As we have seen above (see pg. 7), Albania is the central hub of the production and

trafficking of cannabis to the EU. Currently, one of the main cocaine gates from Latin America to Europe, using the so-called Balkan Route, is similar to the Balkan Cartel (Qyno, 2021; Europol, 2020c).

In general, one of the most critical strengths of the Balkan criminal organisations, and more specifically the Albanian Mafia, is their incredible territorial expansion.

Fourthly, the figure below displays the number of countries in which Europol has carried out operations against the Albanian Mafia throughout the world:

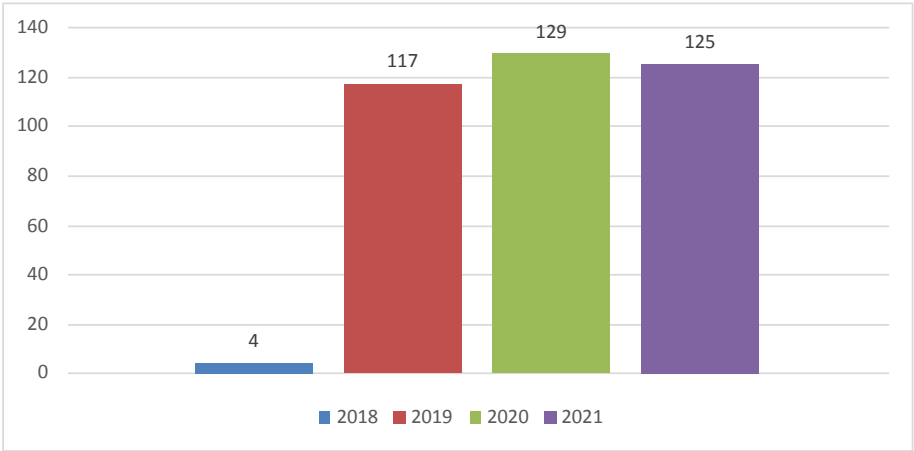
Graph 4. Countries Involved in Police Operations



Analysing all Europol's joint police operations, we notice that 47 countries (the graph shows the most relevant) have been involved in these operations. The main countries are from the EU (14 of the whole), as it can be observed Spain is leading the role of this "black-list", followed by Germany, Netherlands, France, Belgium, Italy and finally, the UK. The most relevant data about non-EU countries are Albania, in the same position as Spain, with six police operations in its field. It is essential to highlight the operations which have also involved countries from South America, Asia, and the Middle East (Qyno, 2021; Europol, 2020c).

Another point to consider when assessing the threat of these groups is the number of arrested in this period. In the fifth graph, we investigate the arrests.

Graph 5. Number of arrested members of Albanian-speaking criminal groups

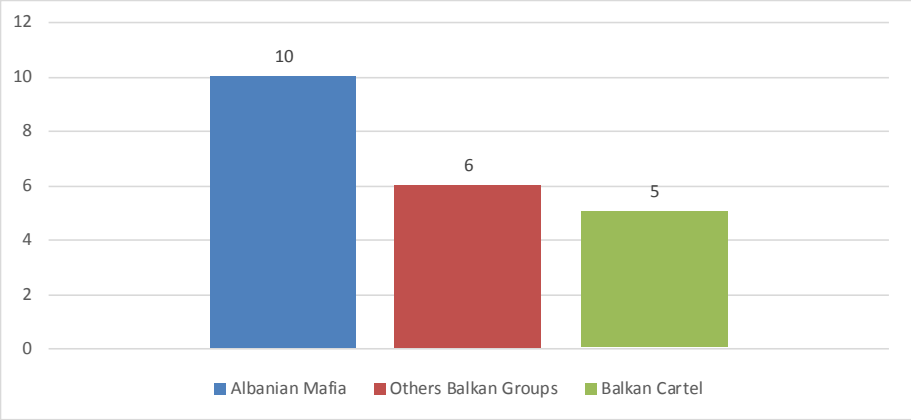


The analysed data shows a worrying trend from 2019. The number of arrested individuals related to the Albanian Mafia rose to about a hundred twenty detainees per year, and the volume seems to be constant for a longer term. The European security agencies should consider that between 2018 and 2021, 375 people were arrested in several police operations supported by Europol as a coordinative body. No data available describes the actual number of detained individuals related to the Albanian Mafia in the EU member countries in those operations, not mentioning Europol. This is undoubtedly one of the significant methodological shortcomings of this research since knowing the current number of operations and arrests carried out throughout the European Union. Still, no such figure is published by the member states or the EU.

We have assessed the set of police operations against all criminal groups in the Balkans to highlight the volume of operations against the Albanian Mafia.

At this specific period, the number of police operations against all organised groups from the Balkan region was up to twenty-one. The Albanian Mafia is spearheading the operational targets by ten (47.65%), followed by other Balkan groups with six operations (28.57%) and finally, the operations against called "Balkan Cartel" with five operations (23.80%). Although Balkan Cartel is in the third position of the graph, they can be considered the second highest threat due to their structural advancements and organised crime syndicate character over the rest and multiple Balkan groups mentioned in the graph at the second position. (Europol, 2018a; Europol, 2018c; Europol, 2019d; Europol, 2020d; Europol, 2021d).

Graph 6. The Number of Police Operations by Targeted Groups (2018-2021)



Discussion and Conclusion

In the review period, criminal organisations from the Balkans, including the Albanian Mafia, were active in the EU. The collected evidence proved that even the COVID-19 pandemic could not significantly impact it. This data is relevant and shows the adaptability of these groups. Of the six critical points analysed (graphs 1-6), the most relevant is the number of operations, the geographical scope, the countries involved, and the number of arrests. Another noteworthy fact is that of the 21 operations carried out against Balkan organisations, 10 of them were explicitly against the Albanian Mafia, resulting in about every second of the total.

Similarly, in the criminal markets, drug trafficking remains the leading criminal activity, with cannabis-derived products followed by cocaine constituting the main narcotic drugs. Other critical factors on which we base we claim that the Albanian Mafia is a continuous threat to the EU on the one hand, the power these groups wield in Latin America with the trafficking of cocaine into Europe. This involves the control of the entire production chain and a complex network of facilitators who ensure that drugs reach European markets (UNODC & Europol, 2021; Bargent *et al.*, 2021). The latter is particularly relevant because of the diaspora and connections with other criminal groups. And on the other hand, the volume of cannabis trafficking within our borders has made the Albanians the primary producers and distributors, respectively (Kemp, 2017).

One of the most important issues to cope with this kind of criminal organisation is targeting the key factors or primary enablers of their activities, legal and illegal. When we fight

not against second-rate organised criminals but Mafia-style ones, we need to identify the weak points of the entire business chain. As shown above, the Albanian Mafia is one of the most complex and adaptive criminal networks nowadays, which law enforcement must cope with. A clear example is the *Kompania Bello*, which, far from being completely dismantled, its new restructuring remains a threat to the security of the EU (Mistler-Ferguson, 2022).

The key issues to be identified by law enforcement are these:

1. The clan structure;
2. The global spread of diaspora;
3. The international links established among other criminal groups;
4. A vast number of brokers or intermediaries, and *guarantors* are developing their criminal business (both legal and illegal) around the world.

Law enforcement must improve their intelligence capabilities to create better tools to anticipate criminal activities, for instance, by increasing the programs following the methods of Intelligence-Led Policing (ILP). Moreover, we should maintain and reinforce the cooperation between police and security agencies and benefit from analysis programmes coordinating efforts against Albanian-speaking organised crime, such as Europol's "AP Copper" or "IPA 2019 Countering Serious Crime in the Western Balkans" led by Albanian authorities.

Despite the data obtained in this research, these results should be measured with caution due to the complexity of the phenomenon and the limitations of our investigation. Despite the multiple police operations in recent years, significant information gaps remained. This urges us to continue researching Albanian-speaking organised crime in the EU and elsewhere to understand better the threat that has a considerable impact on our societies in Europe.

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Aspects of Police Corruption in Greece

Evangelos Stergioulis

Abstract

Police corruption in Greece has not yet been subject to systematic scientific research, analysis and evaluation. Greece's socioeconomic and political environment in the post-junta period, along with the absence – for a long time – of an internal police anti-corruption mechanism, contributed to maintaining a veil of opacity over the issue. Based on the existing analysis of police corruption and the international legal context of corruption, the study provides an in-depth analysis of police corruption in Greece against the country's historical, social and political background, with a specific emphasis on the period of economic crisis revealing critical quantitative and qualitative dimensions of corruption within the ranks of the Greek Police. It concludes with concrete proposals for implementing an effective and efficient law enforcement approach in combating police corruption.

Keywords: *corruption; police; Greece*

Introduction

Police corruption has never ceased to exist since the foundation of the police institution. Its quantitative and qualitative extent is often dependent on various historical, political, social and economic factors prevailing in a society and its police force. Due to its complex nature, police corruption has always been considered not only a penal offence but also

an immoral deed, deeply undermining the police mission to serve the community and the citizens fairly and equally. Over time, the international community has elaborated the legal concept of corruption, a fact that has boosted the efforts of the law enforcement community in combating corruption in its own ranks. Police corruption, however, has neither been eradicated nor has it paused to evolve under particular social, political and economic conditions.

The study approaches the issue of police corruption in Greece taking into consideration the official reports published by the Internal Affairs of the Greek Police as well as the limited studies on police corruption in Greece within the historical, social, political and economic context as it evolved in the modern history of the Greek society. It is also based on the findings of the international academic literature on police corruption, despite the fact that there is still no single and generally accepted definition of police corruption to date. The ultimate purpose of the study is to highlight crucial aspects of police corruption in Greece in understanding the criminal phenomenon and to propose specific initiatives and measures that could lead to the improvement of the Greek police system in combating corruption.

The Definition of Corruption

The very first efforts to legally define corruption as a criminal offence were successfully concluded by the Council of Europe (CoE) late in the 1990s. In particular, in 1999, the CoE adopted two international legal texts on corruption which, since then, have constituted the cornerstones of the world society's fight against corruption.

The first legal instrument, the Criminal Law Convention on Corruption, instead of providing a concrete definition of corruption, sets out in detail the context of active and passive bribery of officials in the public, private and international sectors and mandates the signatories to establish a domestic specific law for the incrimination of such actions as criminal offences (Council of Europe, 1999a: art. 1-11).

In the second legal text, the Civil Law Convention on Corruption, the very first definition of corruption is stipulated as *"requesting, offering, giving or accepting, directly or indirectly, a bribe or any other undue advantage or prospect thereof, which distorts the proper performance of any duty or behaviour required of the recipient of the bribe, the undue advantage or the prospect thereof"* (Council of Europe, 1999b: art. 2).

These two Conventions of the CoE were soon followed by the United Nations (UN) Convention against Corruption in 2003. The UN Convention primarily focused on preventing corruption without including a concrete definition of corruption.

However, under the chapter on criminalisation and law enforcement, the UN Convention against Corruption obliges the states to adopt legislative measures for the punishment of corruption as a criminal offence providing specific guidance by specifically defining corruption as:

> *"(a) The promise, offering or giving, to a public official, directly or indirectly, of an undue advantage, for the official himself or herself or another person or entity, in order that the official act or refrain from acting in the exercise of his or her official duties. (b) The solicitation or acceptance by a public official, directly or indirectly, of an undue advantage for the official himself or herself or another person or entity, in order that the official act or refrain from acting in the exercise of his or her official duties"* (United Nations, 2003: art.15).

Those mentioned above three international conventions, along with some essential legal instruments against corruption, such as the Resolution of the CoE on the Twenty Guiding Principles (Council of Europe, 1997) and the Recommendation of the CoE on Codes of Conduct for Public Officials (Council of Europe, 2000), have led the international community to harmonise their efforts in combating corruption that undermines the rule of law.

The law enforcement community has been profoundly affected by the provisions of international law in defining the context of police corruption, establishing internal and external control mechanisms and adopting law enforcement codes of conduct such as, for example, the European Code of Police Ethics (Council of Europe, 2001: art. 21,46). In fact, the efforts of the international community to define the meaning of corruption have been of great value for the world police community in understanding and fighting corruption with the assistance of major academic and empirical law enforcement studies, some of which are mentioned below.

Police Corruption

Police corruption has existed since the police were created. Corruption touches every police corps with the difference to lie in its quantity and quality only (Sherman, 1974:1). One of the first studies on police corruption addressed the issue in New York, London and Paris and found out that they were struggling with increased corruption. Sherman (1974:74) concluded that they had to change their legal systems and create effective control mechanisms to prevent corruption.

According to Punch (1979), police corruption can be manifested in a greater or lesser degree as well as intensity depending on the society's historical, social and political characteristics. In his research on corruption in the Amsterdam Police, he underlined that those

police corruption incidents increased since the city had become a centre of international drug trafficking (Punch, 1979).

Niederhoffer (1967), on his part, considered police corruption as a form of deviating behaviour that derives from the cynicism developed by police officers under the harsh conditions they perform their police duties, while J. Wilson (1968:83) presented police corruption as a component of attitudes and perceptions developed by police officers in conjunction with the low ethical standards prevailing on the broader society.

Despite many surveys and studies on police corruption, there is no standard and generally accepted definition of police corruption (Newburn, 1999:4-13). Nevertheless, it is crystal clear that the broader concept of police corruption consists of two dimensions: the criminal dimension of the act committed by the police officer and the moral one due to violation of police ethics.

In the international bibliography (Knapp, 1973; Roebuck & Barker, 1973:20-42; Sayed & Bruce, 1998; Klockars, 2000), the typology of police corruption comprises an extensive range of illegal police activities and deviating behaviours which constitute a corruption of authority such as bribes, kickbacks, opportunistic thefts, protection of criminal activities, shakedowns as well as police internal payoffs. All these types of corruption encompass an act or an omission by the police officer on purpose aiming at earning money or a material benefit or service directly or indirectly related to his police status and duties (Sherman, 1978:30; Simpson, 1977:23).

The typology of police corruption, however, highlights the basic key features of a particular police culture (Reiner, 2010:118), which is developed, shared and finally prevails within the police staff. It is a set of negative attitudes, perceptions, views, beliefs and behaviour patterns that create a sub-culture within the police ranks favourable to corruption and becoming corrupted.

From the sociological point of view, police corruption is a complex criminal phenomenon, and its causes are directly linked to the broader socio-political environment. In other words, the values, perceptions, norms, and attitudes prevailing in society exercise a catalytic effect on the operation of the police and the behaviour of police personnel.

In a democratic society governed by a system of values and principles that serve transparency, impartiality, social solidarity and cohesion, the police perform their duties strictly within the framework of the constitutional law and adhere to police ethics, thus minimising the conditions under which police corruption may be fostered (Stergioulis, 2008:112).

Indeed, under the impact of the daily practice of police duties, the regulatory framework of police ethics and citizens' anticipations on the role of the police in protecting and serving the community, the police officer's personality and character are progressively shaped by adopting a system of values, attitudes, beliefs and behavioural patterns (Skolnick, 2002). Consequently, in a law enforcement organisation operating with respect for human rights and individual freedoms, the officers progressively develop and embrace values, attitudes and perceptions which make them consciously aware of their mission to strive and better serve the community. In return, the police receive a broader social recognition, trust and appreciation of police work; thus, police corruption conditions are significantly minimised (Punch, 2000).

In a traditional society where institutions are malfunctioning, individual freedoms and social rights are not respected but often violated, the police integrity is widely questioned and the relations between the police and the community are shaped in a climate of mistrust and lack of confidence. In such a hostile socio-political environment it is highly likely that police corruption is triggered and spread across the police (Sherman, 1974).

Additionally, law enforcement organisations and management structures, police training systems and the police culture, in general, are also significant in preventing police corruption (Lee, et al., 2013). From the basic police training, which is the first stage in a police officer's socialisation into the police microcosm until his placement in a police service where the new officer takes up an active role in various aspects of police work, the newcomer is constantly under a pressing and influential environment deriving from the rules of the law enforcement community and the expectations of the broader society (Punch, 2009:34-44).

The impact of police corruption has a catalytic effect on the successful fulfilment of the police mission, primarily based on public trust, acceptance and support of police work (Kääriäinen, 2007). Police corruption completely deconstructs the community's confidence in police work and hinders any effort to establish a mutual trust and confidence between the police and the community. It is therefore imperative for the police to maintain complete transparency in all aspects of police work within the community and display no tolerance for any type of corruption at any of the police rank levels.

Police Corruption in Greece

The historical and socio-political framework

The Greek Police, in its present form, was established in 1984. Until that year, policing in Greece was carried out by two police forces. The Greek Gendarmerie, a military-organ-

ised police force with jurisdiction across the country, was founded in 1833 under the guidance of a French delegation invited at that time for this specific task.

After the end of the First World War and increased policing needs in a rapidly growing capital and its suburbs, it was decided that a new civil police body was urgently needed. To this end, a delegation from the London Metropolitan Police was invited to assist in establishing a new police force, the City Police, which was created in 1921 with policing jurisdiction limited to the cities of Athens, Piraeus, Patra and in the island of Corfu. In 1984, these two police forces merged into a single national police force, today's Greek Police (Stergioulis, 2001:214; Law 1481/1984).

Before and after the establishment of the Greek Police, the issue of police corruption has been hardly discussed in public, although it has existed in all police ranks. The end of a seven-year dictatorship (1967-1974), however, has signalled the democratisation process of the Greek Police (Papanicolaou & Rigakos, 2014; Stergioulis, 2019), as well as the public discussion on policing issues, like the protection of individual rights and freedoms as well as corruption within the police.

Over time, police corruption incidents used to gain high publicity via the media causing public concern about the absolute magnitude of it. The very first official report on police corruption covering the period 1975-1981, i.e., the first six years after the fall of the Greek junta in 1974, appeared in 1987 in the Greek press. According to this report, 61 police officers were allegedly accused of having committed a wide range of criminal offences such as thefts, burglaries, bribes, drug trafficking and frauds (Ta Nea, 1987; Stergioulis, 2001:195).

Early in the 1990s, police corruption was progressively discussed in public and reforms into the internal police function were considered necessary to enable the police staff to reject negative attitudes acquired in the past and adopt their duties fully to meet the citizens' expectations (Apogevmatini, 1994). Increasing public concern over corruption in the Greek Police led the chief of the Greek Police to officially announce that 1000 cases of police officers were under disciplinary investigation, of which only 50 were related to police corruption (To Vima, 1995; Stergioulis 2001:196). It should be noted, however, that no legal definition of police corruption existed at the time and the characterisation of a police officer's act as corruption mainly was based on internal police investigators' discretion.

Alongside this debate on police corruption, the very first extensive public discussion on political corruption in Greece broke out as a consequence of formal accusations against the Greek prime minister and a number of ministers in relation to a million-dollar embezzlement scandal. It is worth noting, however, that the context for the concept of corrup-

tion in the Greek civil and penal legislation, as well as in the police disciplinary law, was largely perceived about human feelings and ethics, such as the corruption of a person's character and the breach of society's ethics highlighting, hence, the moral dimension of corruption (Lambropoulou, 2011).

The assessment of the national integrity system of Greece conducted by Transparency International found that the country's public sector aggrieved by corruption not only affects the welfare of citizens but has also a negative impact on the country's image on the international stage. According to the assessment, it is not only the relevant legal framework that needs to be reviewed and modified but, above all, a change in the culture that preserves corruption in Greece is called for (Transparency International, 2012:8).

In this socio-political context and under the pressure of the international community's initiatives against corruption, Greece was urged to reform its legal system to combat corruption and meet international standards. As a result, in 2000 Greece ratified and integrated into the national legislation (Law 2957/2001) the European Civil Law Convention on Corruption (Council of Europe, 1999a). Later, in 2007, the European Criminal Law Convention on Corruption (Council of Europe, 1999b) was ratified (Law 3560/2007), followed, in 2008, by the ratification (Law 3666/2008) of the United Nations Convention against Corruption (United Nations, 2003).

The first and foremost reform introduced into the Greek Police structure, for the first time in its history, was the establishment of a specialised police service in combating police corruption (Law 2713/1999) in accordance with the provisions of the European Criminal Law Convention on Corruption (Council of Europe, 1999a: Art. 20). The Police Internal Affairs Directorate is directly addressed to the chief of the Greek Police, supervised by the prosecutor of the Court of Appeal and authorised to investigate police corruption in the entire state territory. In 2003, the Police Internal Affairs' jurisdiction was expanded to investigate corruption offences of all civil servants (Law 3103/2003).

The establishment of the Greek Police Internal Affairs was confronted with lots of concerns and reservations by the Greek police community about the selection criteria of the Internal Affairs staff and the appointment procedures of the Head of Internal Affairs. Similarly, the alarming rise of police corruption caused a strong reaction from the Greek Police Federation, criticising the police and political leadership for lacking a strategy for combating police corruption that has taken on new qualitative dimensions due to the economic crisis (Pan-Hellenic Police Federation, 2013). Greece has presented a national strategy against corruption (Ministry of Justice, 2013), while the Greek Police Headquarters has never communicated its own strategy to this date.

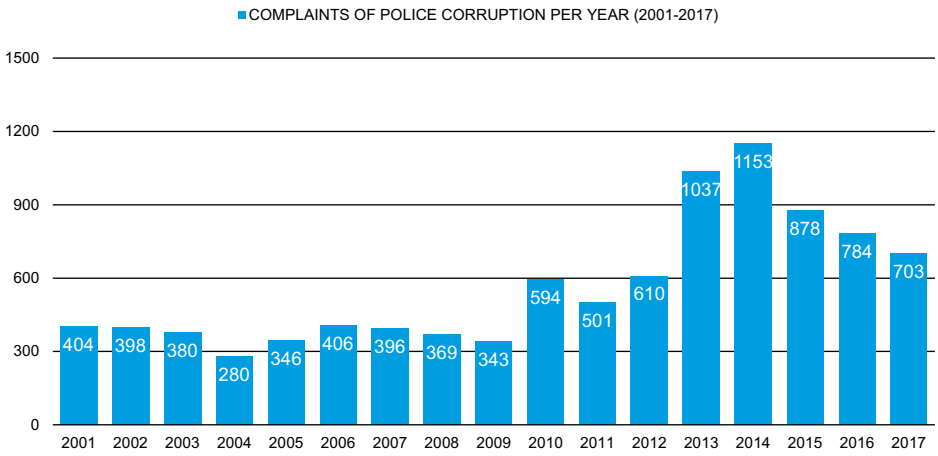
The extent of police corruption in Greece

Despite the above-mentioned reactions, the establishment of the Police Internal Affairs Directorate was a breakthrough in the fight against police corruption, given the fact that since 1984, when the Greek Police were founded, police corruption offences used to be investigated by every police service across the country in whose jurisdiction the incident occurred and in line with the police disciplinary rules.

Since the Internal Affairs Directorate has taken up its full activities, the investigation of police corruption has been centrally coordinated and conducted at the national level. In addition, for the first time in the history of the Greek Police, police corruption data has been systematically recorded and published since the beginning of 2000, which significantly contributed to the understanding of the phenomenon within the police ranks.

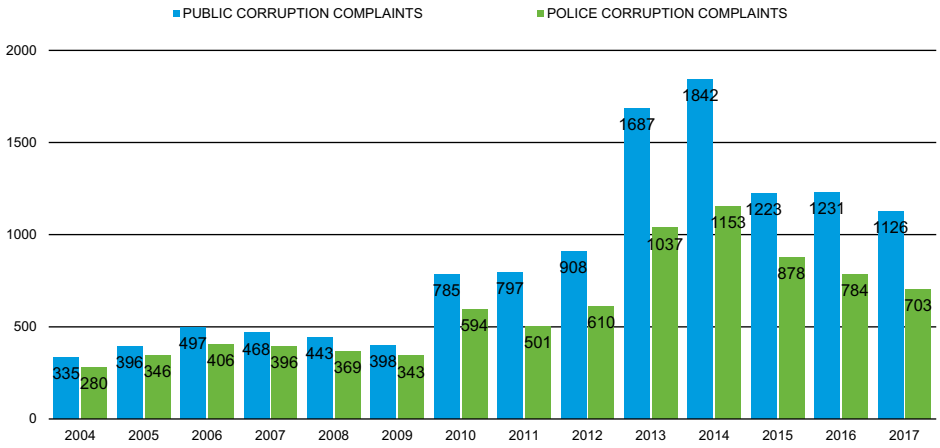
As presented in the following chart 1, in the first decade of 2000, public complaints of police corruption appear to be stabilised between 280-406 complaints per year (Internal Affairs Reports, 2010:16, 2017:44). Nevertheless, since the beginning of 2010 when Greece enters into an austerity period due to the economic crisis, police corruption complaints have sharply increased by nearly 300% in the period 2013-2014. Public complaints cover a broad spectrum of various types of police offences, such as bribery, theft, abuse of power, fraud, breach of duty and blackmail (Internal Affairs Report, 2017:63-65).

Chart 1. Complaints on Police Corruption 2001-2017



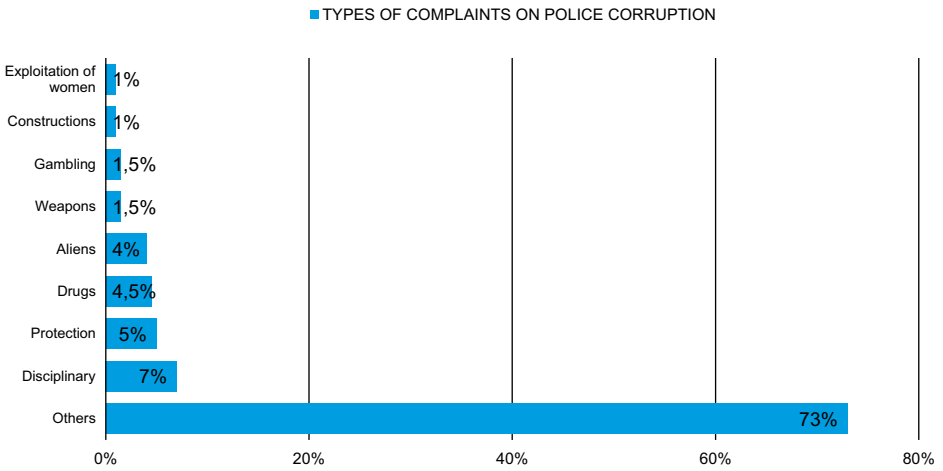
As mentioned above, since 2003, the mandate of the Police Internal Affairs Directorate was extended to investigate corruption in all public services across the country. A significant quantitative aspect of corruption in Greece is displayed between police and public corruption complaints. Comparing the number of police corruption complaints with the total number of public corruption complaints recorded per year, it has clearly appeared that police corruption complaints constitute nearly 80% of the total number of public corruption complaints, as indicated in the below chart 2 (Internal Affairs Reports, 2011:14; 2012:14; 2016:23).

Chart 2. Comparison of Complaints on Public and Police Corruption 2004-2017



Furthermore, by analysing the composition of police corruption complaints as presented in the following chart 3, the type of police corruption with the highest percentage (73%) comes under the category "others" which comprises cases of police delinquent behaviour (Internal Affairs Report, 2014:27). This rather vague definition of police deviance should be subject of further analysis in order to clarify the exact types of police offences that constitute the significant part of police corruption in Greece. A clear picture of the so-called police delinquent behaviours could also facilitate setting up a targeted police strategy and implementing appropriate preventive measures.

Chart 3. Composition of Police Corruption Complaints



The underlying factors of police corruption are complex and vary in every society depending on various economic, political, social, organisational and cultural determinants. In the case of Greece, the economic crisis that has plagued the country since 2010 has deeply affected police personnel. Economic hardship has led the Greek government to impose a series of financial cuts reaching up to 50% of police salaries (Law 4093/2012), which had a severe impact on police officers' standard of living. Although qualitative research on the impact of the economic crisis on the increase of police corruption is needed, economic crisis and police corruption in Greece appear to be correlated, as the period of economic crisis corresponds with an unprecedented increase in police corruption complaints.

A special report of the Greek Ombudsman based on 176 cases of police corruption concluded that police disciplinary controls against police officers accused of serious offences had rarely resulted in full attribution of accountability (Greek Ombudsman, 2004:11). The results of this report have led the Greek Police Headquarters to proceed with the establishment of an independent police unit with exclusive authority to investigate citizens' complaints against the police staff.

The establishment of an independent Police Complaints Authority was a national obligation in compliance with the recommendation of the European Commissioner for Human Rights (Council of Europe, 2009). Nevertheless, the newly-established police agency was met with scepticism in the Greek police community. Since the agency was established (Law 3938, 2011, Presidential Decree 78, 2011), it has never taken up its activities due to the unwillingness of Greek police officers to staff the new service (Stergioulis, 2018). Finally, after a long period of being inactive, the Police Complaints

Authority was abolished, and its competencies were assigned to the jurisdiction of the Greek Ombudsman (Law 4443, 2016).

Lastly, the extent of police corruption often corresponds with the public perceptions of corruption prevailing in a country. In Greece, the high level of police corruption appears to correspond with the high level of public perceptions of the spread of corruption in the police and public institutions. In a Eurobarometer survey report on corruption in the European Union, Greece is on the top regarding the public perceptions of corruption as 93% of citizens believe that corruption exists in the national public institutes, and 52% believe that corruption is widespread in the Greek Police (European Commission, 2017:38; Lambropoulou et al., 2008).

Conclusions

Police corruption is constantly evolving following the social, economic and political developments while it is directly linked to society's structure of values, beliefs and perceptions (Goldstein, 1975:23). As it appears in the case of Greece, an unprecedented increase of police corruption incidents was recorded during the economic crisis period the consequences of which had an adversary impact on the financial status of the police staff.

Since the beginning of 2000, sufficient international legal instruments have been available for the Greek law enforcement community which have significantly contributed to combating police corruption. However, apart from an adequate legal framework, a comprehensive law enforcement strategy is also needed to prevent police corruption (Giuliani & Bratton 1995). It is, therefore, imperative that the Greek Police should develop its own strategy for preventing and suppressing corruption.

For years the training of the Greek police staff on police corruption has been insufficient. It has only taken place through occasional lectures delivered in the police schools. An efficient police training scheme for the prevention of police corruption should be based on a comprehensive and uniform anti-corruption curriculum (Cepol, 2018) applied to all police ranks. Police anti-corruption training must be considered a highly effective strategic tool in increasing awareness and changing police culture and perceptions of corruption in the long term (Chan, 1997:223). Increasing police awareness through appropriate police training combining theory and best practices in combating police corruption is a critical action in preventing police corruption.

The lack of an efficient accountability mechanism for the police in Greece remains both a tough and sensitive issue undermining the democratic function of the police force and overshadowing the effectiveness of the measures against police corruption. Being the

country's only national police force for almost four decades, the structure and function of the Greek Police have never been evaluated by an independent external auditor since it was established. A national police force, with nearly 55.000 staff, is only accountable to the minister of the Citizens Protection Ministry with absolutely no external oversight independent of the police.

It is of vital importance for the integrity of the police to establish its own internal and external mechanisms for the impartial and thorough investigation of police corruption in full transparency (Newburn, 2015:23,37). The Greek Police has considerably delayed setting up an internal affairs unit, while the Greek police culture has seriously impeded the function of an independent police complaints authority.

Lastly, research into police corruption should be encouraged and supported within the law enforcement community as it promotes integrity and transparency towards the broader society and the citizens the police serve. In the Greek Police, research into police corruption has been inexistent so far, although the official published data on police corruption display a continuous and steady increase over the last two decades. Therefore, it is imperative for the Greek police to adopt and promote research into police corruption to increase awareness and develop and implement a comprehensive law enforcement strategy for preventing police corruption.

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Volunteer Police Cadet Leaders in England and Wales: Economic benefits to policing

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Abstract

Policing organisations across the world are continually increasing the use of volunteers in support of day-to-day activities as they attempt to deal with unprecedented challenges. The utility of this approach is contested by some, with debates concerning the economic, organisational, and social benefits of the use of volunteers within policing being paramount. However, it is the economic benefits that are often highlighted within this debate as public policing organisations come under increasing pressure, often as a result of reduced funding and increased demands for service.

This article explores the potential economic benefits of one such under-reported volunteer role in England and Wales, that of the Volunteer Police Cadet (VPC) leader. Based upon original research involving VPC leaders, the article explores the commitment of such volunteers and discusses the potential economic and social benefits. The results indicate a clear economic benefit for policing organisations, whilst highlighting the social benefits for communities at large and for the VPC leaders themselves in terms of personal development. This research, whilst purely indicative rather than completely representative, illuminates the potential for the use of volunteers across a range of roles within policing which may have resonance across a number of countries.

Keywords: *Benefits, Volunteers, Police Cadets, Leader*

Introduction

There is an established history of volunteers supporting frontline policing (Bullock & Leeney, 2016; Wolf *et al.*, 2017; Dobrin, 2017). Across England and Wales, uniformed police volunteers (special constables) can trace their history back to 1831 (Bullock & Leeney, 2016). In the Netherlands, the routes of the contemporary volunteer uniformed police patrol officer (politiesurveillant) has its origins in a model of reserve policing from 1948 (Van Steden & Mehlbaum, 2018), and in Estonia the role of the volunteer assistant police officer was established in 1994 (Ramon, 2020).

There are also a number of other volunteer roles within policing that are often lesser known and under researched, and although not necessarily on the frontline, are equally valuable to the service. Some Dutch police volunteers donate hours to roles behind the scenes, including administration, computing and the staffing of receptions (Van Steden & Mehlbaum, 2018), while in Estonia IT specialist are recruited as volunteers to counter cyber threats (Hitchcock et al., 2017). O'Connor *et al.,* (2021) report a wide range of roles conducted by volunteers within Canadian policing, ranging from supporting crime prevention initiatives and search operations, to acting as role players during training and undertaking administrative activities. Whilst across England and Wales, police support volunteers (PSVs) also provide many similar 'behind the scenes' roles, which differ between police forces, but can include the staffing of reception areas, the taking of crime reports, updating victims of crime, and donating their time to lead, inspire and support young people as Volunteer Police Cadet (VPC) leaders.

Devore (1989) identifies police cadet schemes for young people in Australia and the UK during the 1930's and the growth of schemes in the USA during the 1950's targeted at attracting young people towards careers within policing. Schwindt (1998) describes how in the 1970s an idea from Switzerland was evolved in Germany as a uniformed volunteer traffic cadet scheme for young people, where teenagers were trained to support the police controlling the flow of traffic at major events, such as exhibitions or parades.

The contemporary national VPC scheme across England and Wales was launched in 2013 as a police focused and led inclusive youth organisation (VPC, n.d.). Although no official national figure has been published, in the region of 2,300 to 2,500 volunteers, including a small number of employed staff, lead the delivery of the VPC scheme across all police force areas (Callender *et al.,* 2019), supporting almost 18,000 cadets in over 500 units (DeMarco & Bifulco, 2020). However, what are the economic benefits to the policing of utilising volunteers to lead the cadet schemes?

Review of the literature

The benefits and challenges of utilising volunteers within policing is often debated by Government (Millie, 2019; Löfstrand & Uhnoo, 2020), not least of which, because at face value volunteering expands the visible presence of policing at minimal cost whilst also continuing to establish and grow the legitimacy desired between the police service and communities they serve (Gravelle & Rogers, 2010; Millie, 2019). For example, in the region of 3,800 volunteers have been trained and equipped in Sweden to support policing by providing a visible and highly recognisable volunteer policing presence (Löfstrand & Uhnoo, 2020), whilst in Estonia 1,050 volunteer uniformed assistant police officers donate the majority of their time on preventative duties such as visible patrols (Ramon, 2020). In the Netherlands contemporary volunteer policing consists of almost 1,700 uniformed police volunteers who perform similar visible duties as their regular police colleagues, and 1,600 Police Support Volunteers, who donate their time to support policing 'behind the scenes' functions (Van Steden & Mehlbaum, 2018). Across England and Wales slightly over 9,500 special constables (Home Office, 2021), who when on duty have the same warranted powers and almost identical uniforms as regular police officers, support front-line policing, with additionally just under 8,500 police support volunteers (PSVs) providing 'behind the scenes' functions (ibid.). Whilst in Scotland, volunteer special constables are often partnered with a regular officer to corroborate evidence (Dickson, 2015).

Gravelle and Rogers (2010) describe how volunteers can be used to augment the finite resources available to policing organisations. As well as the volunteer roles, such as special constables across the UK or reserve deputies in the USA, directly supporting frontline policing, examples of 'behind the scenes' volunteer roles range from the staffing of reception areas or the monitoring of CCTV for the Dutch police (Van Steden & Mehlbaum, 2018) to supporting victims and witnesses in police forces across England and Wales. However, volunteering in policing is not free, it incurs direct and indirect costs for the police service, such as allowances, the issuing of resources, completing training etc., and it is also worthy to note that it can incur costs for the individual volunteers, such as transport to/from events, additional clothing, childcare etc. Reported organisational costs vary significantly. For example, Dobrin (2017) details how the initial uniform and equipment costs for a volunteer police officer in the USA amount to $7,000 (€5931), whilst Schwindt (1998) describes how traffic cadet uniforms cost DEM 350 (€178). Hirschmann (2014) identifies how volunteer police in Baden-Württemberg, Germany can claim an hourly compensation of €7 an hour, similarly, special constables in England and Wales who are retained on duty beyond 4 hours, but not exceeding 8 hours, can claim up to £7.23 (€8.45) for refreshments (Home Office, 2014). There are ongoing debates with regards to such cost versus the benefits of utilising volunteers within policing (Gravelle & Rogers, 2010; Van Steden & Mehlbaum, 2018).

Across England and Wales, suggested costs for volunteer roles within policing vary hugely. This is probably related to how direct and indirect costs are measured by individual forces. For example, one force reports how it deployed 162 PSVs at a cost of slightly over £1,400 (€1,638) each, whereas another force reports deploying 536 PSVs for a little under £145 (€169) each (Unison, 2014). A third police force reports training costs for a special constable of just under £1,400 (€1,638) each, with uniform and equipment costs in the region of £480 (€561.60) (Durham Constabulary, 2015).

Van Steden and Mehlbaum (2018) suggest a blurred vision and ongoing mistrusts in the Netherlands with regards to the replacement of paid roles with volunteers. O'Connor *et al.,* (2021) also suggest concerns over integrating volunteers within the regular police service in Canada due to the perception of replacing paid roles. However, in contrast, the Police Federation for England and Wales (the staff association for police constables up to the rank of Chief Inspector), view the volunteer special constabulary as an essential part of policing (Police Federation, 2021). Although Bullock and Leeney (2016) point out that acceptance of the special constables seems to be much higher amongst those police officers they work with regularly. One of the public service unions which represents police staff, Unison (2014), also acknowledge that some volunteer roles, such as those donating their time as volunteers with police cadets, are non-controversial, as they are genuine voluntary roles not affecting the employment of paid staff. The acknowledgement that some volunteer roles are not replacing paid roles is a positive and welcome step. It is however important for policy makers to balance the costs associated with recruiting, training and equipping policing volunteers with their part-time commitment and likelihood of longevity in their voluntary role (Bullock and Leeney, 2016).

In the United Kingdom (UK), a House of Lords debate (1968) provides details of how uniformed police cadets were recruited at 16 and trained towards employment as a police constable at the age of 19. However, the contemporary 21st century Volunteer Police Cadet (VPC) scheme across England and Wales is a very different entity. The VPC scheme is a uniformed youth group within the wider policing family for young people aged 13 to 18, with over 18,000 cadets (VPC, n.d.). The cadets meet weekly, not to develop into future police constables, but rather to adopt a spirit of adventure and become good citizens (Citizens in Policing, 2021). Cadets wear a uniform (although it differs across police forces) when attending weekly meetings or events, study a structured programme of knowledge and life skills development which includes learning about the structure and history of policing across the UK, basic criminal law, first aid, confidence building and teamwork. The cadets have the opportunity to visit different policing specialisms (such as neighbourhood, firearms and crime scene investigation departments), support social action in local communities (such as anti-theft bike marking campaigns or crime prevention leaflet drops) and take part in sport and adventurous activities (ibid.). Similarly structured youth policing programmes are described by Anderson *et al.,* (2008) in the USA.

Across England and Wales there is a National VPC team who lead the development of strategy and standards supporting the cadet scheme across the numerous units (VPC, 2021a). At the centre of the delivery of the unit activities are the VPC leaders, who freely donate their time to lead and manage the cadets towards achieving the national VPC objectives of youth led social action making a difference in local communities, diverting young people away from crime, building trust between young people, communities and policing, whilst allowing young people to have a voice within contemporary policing (VPC, n.d.). The majority of volunteer cadet leaders come from policing backgrounds, such as police officers or staff, but equally citizen volunteers with no policing background can also become leaders. All volunteers being vetted by their local police force to national standards, including a Disclosure and Barring Service check (which reports on any criminal records held), as suitable to work with young people and the vulnerable (VPC, 2021b).

The hours donated by leaders are not fixed but flexible depending on their availability and the roles for which they volunteer (VPC, 2021b). These roles range from the teaching of cadets during parade evenings or dealing with the required administration, to using existing specialist knowledge and skills to supervise community visits or deliver outdoor activities (ibid.). Whichever roles the leaders donate their time for, Anderson *et al.,* (2008) highlights the importance of establishing supportive relationships between adult leaders and young people in community-based youth police programmes, with Pepper and Silvestri (2017) reporting that within the Metropolitan Police VPC scheme, serving London, the cadets had strong relationships with their leaders, often sharing the same values and norms.

Research Methodology

In the autumn of 2020 the researchers, in collaboration with the National VPC team who assisted in identifying established cadet schemes across England and Wales to be involved in the research, developed and administered an ethically approved survey to volunteer police cadet leaders across schemes embedded in six police forces areas.

The self-completion questionnaires and consent forms were administered online to 103 participants with respondents asked to return completed documents directly to the researchers. This enabled those completing the questionnaires to respond freely avoiding any sensitivities of returning via gatekeepers. As well as an initial introductory email being sent to participants before administering the survey, a follow up email was also sent to participants encouraging completion following initial administration. The questionnaire was constructed to gather background demographic information of the respondents, then using a blend of open questions, closed questions and free text

boxes to explore a range of data including time volunteering with the scheme, donated hours and experiences as a VPC leader.

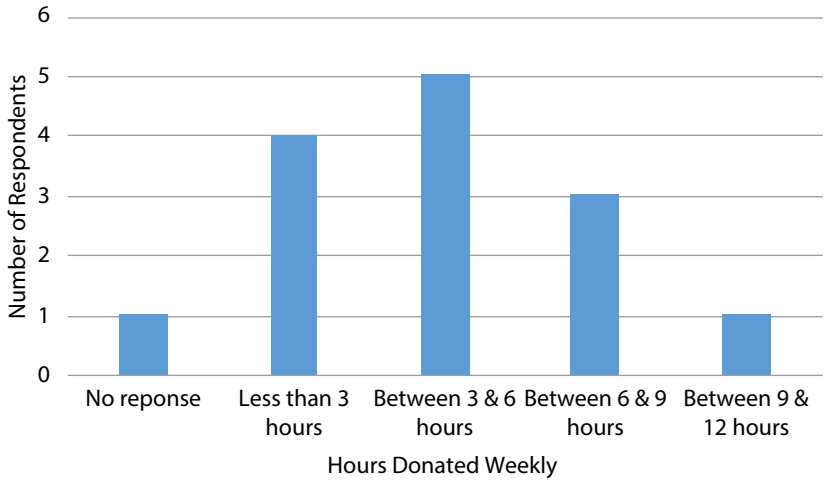
All completed and returned questionnaires were anonymised and the findings combined to ensure that no individual or cadet scheme could be identified, with the findings being analysed by researchers aware of the possible impacts of bias.

The benefits of conducting the research using online methodologies are often explained as providing an economical way of reaching out to a geographically spread sample groups, and although this was an important aspect in this research, there was an added dimension of the need to adhere to the changing risks and rules in relation to COVID-19.

Findings and discussion

The response rate to the survey was limited, with 14 questionnaires (13.6%) received. This could be due to a number of reasons including the survey methodology adopted, the participants focus elsewhere than the VPC scheme during the Covid-19 pandemic or the perceived value and impact of completing the questionnaire. As such, the findings are not easily generalisable to the wider population of VPC leaders but do provide a useful insight for policy makers.

Chart 1. Self-reported average weekly hours donated by VPC leaders



Of the responses received, 8 were completed by male leaders (57%) and 6 female leaders (43%), 10 of the leaders (71.4%) were over 35 and only 4 (28.6%) were between 18 and 34

years of age, with 11 leaders (78.5%) having volunteered for less than two years and no-one having volunteered for more than 4 years with the VPC scheme which, at the time of the data collection, had been established nationally for 7 years. Of the respondents, 11 (78.5%) were either in full-time or part-time employment.

Almost two thirds of respondents, 9 (64%), reported donating an average of more than 3 hours a week, with 1 respondent reporting donating an average of between 9 and 12 hours a week. Denny *et al.,* (2021) detail how volunteer leaders with the military sponsored cadet forces across the UK donate an average of 10 hours a week, with Talbot (2015) reporting donating an average of 15 hours a week as a volunteer scout leader. In a research project one special constable reported volunteering for a total of 120 hours in a month (Pepper and Wolf, 2015). Talbot (2015) continues to identify how giving time freely for a voluntary cause that an individual passionately supports, can lead to volunteers overstretching themselves and not managing their other commitments, as a result this requires careful management to avoid the feeling of burnout. Such overstretch of the volunteers leading to possible burnout is also highlighted by Warren and Garthwaite (2015). Talbot (2015) also explores a number of other negative impacts on volunteers such as stress, anxiety and excessive demands including at times feeling pressured to deliver a service. Similarly, Bullock and Leeney (2016) discuss how volunteers can feel pressured to volunteer at times that were not convenient for them.

There is no fixed way of calculating the economic benefits to policing of volunteering. Volunteering Gloucestershire (2021) describe how using the National Living Wage in the UK [currently £8.91 (€10.42[1]) an hour for those over 25] can be utilised to calculate the economic value of volunteers, but then continue to discuss how local charities believe that between £11.50 (€13.45) an £13.50 (€15.79) an hour is a more realistic figure. Dostál (2021) describes an alternate approach to calculating the economic value, where the value is equal to the number of hours donated times an hourly wage for a similar job role. As an example, similar youth leadership jobs advertised across England and Wales at the time of writing are with St John Ambulance (2021), who recruit part-time youth support workers to lead the planning and delivery of the national NHS Cadet programme for those aged between 14 and 18. The programme aims to develop the skills of young people for future volunteering within health, and for such paid roles, the advertisement states a reimbursement of £11.00 (€12.87) per hour (ibid.). Similar multiple part-time youth leadership roles advertised at the same time include Combined Cadet Force school staff instructors at £10.53 (€12.32) per hour, high ropes Assistant Outdoor Activity Instructors at £10.65 (€12.46) an hour and Activity-based Youth Workers at £9.74 (€11.39) an hour.

1 Figures converted 16 July 2021 based on € values of £ = 1.17, $ = 0.85, DEM = 0.51

Adopting the approach of Dostál (2021), the mean of the four similar part-time youth roles described above is calculated at £10.48 (€12.26) an hour. As such, when calculated together, the average weekly economic value to the VPC scheme locally and nationally from the self-reported weekly hours donated by the 14 respondents ranges from a weekly minimum of 42 hours, equating to £440.16 (€514.98), and a maximum of 81 hours, equating to £848.88 (€993.18), in reality it will be somewhere in between. Although these findings are not easily transferrable to the whole volunteer cadet leader population numbering over 2,000, if they were transferred to the 103 possible participants in the survey alone, the weekly hours donated and the economic value could equate from a minimum of 309 hours at £3,238.33 (€3,788.83), to a maximum of 596 hours, at £6,246.08 ((€7,307.91), a substantial commitment by volunteers with significant economic benefits to the VPC scheme and the wider policing family.

It is equally important to recognise that volunteer leaders are not employed and measuring the economic benefits in isolation does not take account of many other benefits from volunteering to both communities and individuals. The National Council for Voluntary Organisations (2019) suggests volunteering has benefits across stakeholders in terms of economic, human, social and cultural capital. Leahy et *al.,* (2020) suggesting that volunteering within policing, in whatever capacity, has a positive impact on engagement with local communities, along with enhanced participation by the community itself in policing (Dobrin, 2017). This certainly appears to be the case with the range of activities executed by VPC leaders, as cadets' report valuing their involvement and impact in local communities (Callender *et al.,* 2019).

Anderson *et al.,* (2008) suggest that young people who engage with such youth policing programmes feel more comfortable and respected by the police, whilst Callender *et al.,* (2019) identified how the VPC scheme had positive impacts on those young people who engaged with it. It is therefore worth considering the transferability of other benefits to the police service of the volunteer cadet leaders who champion policing with their cadets, as they not only bring transferrable professional skills with them as a volunteer to their role (Millie, 2019; Leahy et *al.,* 2020), but also develop new and enhance skills of leading young people whilst improving their confidence in liaising with younger communities. DeMarco and Bifulco (2020) report how volunteer cadet leaders describe one of the benefits of volunteering as being the opportunities to reach out and support young people in local communities. The findings from the current research would tend to support this with one VPC leader respondent describing skills of youth engagement in the free text, stating how being a volunteer leader allowed them *"to work with young people from disadvantaged background and gives them an opportunity to see police officers in a different light"* and another respondent commenting how *"For anyone I believe that being a VPC Leader can help gain more confidence*". Unsurprisingly, the majority, 12 (85%), of the cadet leaders responding either agreed or strongly agreed that the VPC leader role assisted them in understanding how to lead and supervise young people.

Cadet leader skills should also assist in meeting a number of the VPC scheme core objectives of diverting young people away from influences that may have a negative impact on them which could lead to the commission of crime, whilst also building trust between young people, local communities and policing (VPC, n.d.). Similarly, Denny *et al.,* (2021) report how volunteer leaders describe cadet membership of the military sponsored cadet forces as providing a positive alternative to criminal gangs and reduced vulnerability to manipulation by radical groups. Such positive engagement by cadet leaders can have economic impacts by providing role models, engaging with sometimes hard to reach communities whilst arguably reducing crime and the costs of policing, along with ultimately costs to society as a whole. Edmunds *et al.,* (2021) provides details of an evaluation of a structured programme of activities implemented to divert young people away from crime in New South Wales, Australia, which led to opportunities for significant reduced policing costs. However, estimating the costs to policing of dealing with crime (and other anti-social behaviour) can vary greatly due to a range of variables including crime type, allocated resources, administration etc. This of course also takes no account of costs to the wider criminal justice system, victims and so on. Heeks *et al.,* (2018) provide estimates of costs for policy makers of some crimes committed across England and Wales, and similarly Glaubitz (2016) discusses costs of crime in Germany.

In addition, almost two thirds of respondents in the current research, (64%), either agreed or strongly agreed that the role provided new skills and experiences for future roles or jobs, Denny *et al.,* (2021) also found similar career benefits for military sponsored cadet forces volunteers. The development of these additional transferrable skills may have economic benefits within policing, where a significant number of VPC leaders are employed (VPC, 2021b), or externally within wider society.

However, given one of the core objectives of the VPC scheme is the engagement by cadet units in community actions, almost two thirds of respondents (64%), either disagreed or strongly disagreed that being a volunteer leader made them more aware of local community issues, with similar numbers of respondents (57%) either disagreeing or strongly disagreeing, that it made them more aware of local issues relating to equality, diversity and inclusion. The benefits of volunteers understanding, representing and giving back to their local communities is of great importance (Dickson, 2021). As such, a greater awareness of local community issues may be an aspect to enhance amongst leaders or alternatively the sample may not reflect the broader understanding. Either way, this requires further exploration to make the best use of the VPC scheme, the opportunities it presents and the valuable economic resource.

Surprisingly, respondents were fairly evenly split as to whether the role of VPC leader is appreciated within the police service. However, one respondent commented in the free text how *"a large part of my force don't even realise that the cadets exist"*. DeMarco and

Bifulco (2020) tend to agree, commenting from their research that the VPC scheme was perceived as being undervalued by the police service and not seen as a priority due to both limited time and resources.

Denny *et al.,* (2015) explore the social impacts on cadets of being a member of a military sponsored cadet force, which include less absenteeism from school and increased likelihood of attending further and/or higher education. With the Youth United Foundation (2018) adding from their research how membership of a uniformed youth group increases social integration and responsibility. In the same way, the overall value of the VPC scheme to society may not necessarily be founded solely in the priorities of the 'here and now', rather in also meeting the societal needs of the not-too-distant future. Integral to the success of the VPC schemes are the volunteer leaders who need to feel part of the wider policing organisation.

If there is a need to recruit further volunteer leaders from across the police service, then wider promotion of the range of benefits should be promoted across potential volunteers as well as the decision makers. Although notably, all 14 (100%) of the respondents either agreed or strongly agreed that they would recommend the role of VPC leader to anyone interested in helping others.

Conclusion

Gravelle and Rogers (2010) propose that the economic and community advantages of using volunteers, especially during challenging times, is an option worthy of consideration. Although this research is only a limited snapshot in time, the findings suggest that the engagement of volunteer cadet leaders to inspire, lead and support a cohesive young persons' programme seems a highly viable option for policing, with cadet leaders donating significant hours of voluntary work of great economic benefit to the VPC scheme and the wider policing family. Such commitments as volunteers requires careful management to ensure that in some cases the hours donated are manageable by the individuals. In addition, the benefits of community engagement and diversion of young people from crime add additional value to the volunteer leaders' worth in a way, which is hard to measure. It also appears that the development of transferrable skills by the cadet leaders is not only of value to the individual but may also be of value to the policing family.

Opportunities to promote the broader value and impact of the cadet scheme should be increased across all levels of policing. Future research could also focus on establishing accurate costs for recruitment, training and equipping of policing volunteers across a range of roles, as well as their longevity volunteering, as this will enable an exploration of return on investment. In addition, further research should consider the longer-term community

impact of schemes such as the VPC programme (and other volunteer schemes), and as such identify the wider economic benefits to policing and society as a whole. By doing so, organisations and policy makers will be able to better establish the impact of volunteers who continue to provide invaluable support across policing.

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Longitudinal Evaluation of Recorded Road Collisions During the period of 1994 - 2016: Problem mapping and correction routing

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Abstract

Addressing the long-lasting problem of road collisions, which the Police have been called upon to manage over time, the present study records and evaluates the characteristics of road collisions in Cyprus between the years 1994 and 2016. Quantitative analysis of Cyprus Police raw data on road collisions was conducted, using descriptive and inferential methods, with outcomes being supported by recent literature on road safety. The results yielded substantial findings regarding road collisions at national level, contributing factors, policing and prevention practices as well as shortcomings regarding research on road collisions in Cyprus. Suggestions target both existing and future practices in terms of policing, training, awareness and research.

Keywords: *road collisions, accidents, traffic casualties, police, policing*

Introduction

Road collisions are a major cause of death worldwide. According to the World Health Organization (WHO, 2020), every year, 1,35 million people lose their lives in road collisions, with this being the most frequent cause of death among children between the ages of 5 to 14 and young people between 15 to 29, as well as the primary cause of accidental death in adults (WHO, 2018). Previous research carried out on road safety has also shown

that, despite some recorded progress, the problem remains unresolved (OECD, 2008; Peden et al., 2004). In fact, the World Health Organization estimates that by 2030 road collisions will be ranked fifth among the major causes of death (WHO, 2016). Moreover, according to existing literature, road collisions are the first cause of accidental death or injury worldwide and their causes and consequences are largely attributable to human error, the environment, and the vehicles involved (Pelekis & Skordilakis, 2012). In Cyprus, road collisions are a major socio-economic and public health issue with multiple negative effects and consequences on many levels, including on a personal, family and societal level.

Considering the limited published research on road and traffic safety in Cyprus, the current article analyses and presents important information about the factors that contribute to road collisions in Cyprus and elaborates how these are used in policy planning in order to promote and implement new initiatives in road safety. Specifically, the article explores the longitudinal evolution of the characteristics of road collisions recorded in Cyprus between 1994-2016 in an effort to present new or corrective practices in the field of road safety and the prevention of road collisions. Additionally, it deals with methods of policing, which are assessed in terms of their effectiveness.

Background

Chen et al. (2000), Shope (2006), and Maniati & Pitsikas (2009) view road collisions as an event that can be discussed in terms of three distinct phases: before, during and after the collision. They observed that in each phase, road collisions were mainly attributed to the vehicle, the road environment, and its users. The international literature mainly explores the aetiology of the increased number of road collisions with regard to the first phase (before the collision) and, as stated during the 3rd Road Safety Panhellenic Conference in 2005, human error is considered to be the leading causal factor (Prophilides & Botzoris, 2005). Thus, road safety prevention policies aim at improving driver behaviour and the awareness of road users. As Pelekis and Skordilakis (2012) indicate, in order to achieve a significant fall in road collisions, it is imperative that road safety education and awareness begin from a very young age.

In line with the above, the risk of a road collision increases as a result of drivers' tendency to violate traffic regulations, including speeding and lack of concentration (West et al., 1993; Nabi et al., 2005; Kardara et al., 2009). For example, in a survey by Kardara et al., drivers who had greater involvement in road collisions also reported frequent traffic violations. It should be noted that, in the aforementioned research, "violation acts" are described as the deliberate deviation from safe driving, such as red traffic light violations, and not the accidental failure of, for example not checking the side mirror. Hence, a great

number of collisions is not due to drivers' lack of ability to drive safely, but due to their tendency to violate the traffic code.

Driver behaviour is one of those characteristics that traffic planners cannot control. The geometrical and operational features of a road environment can be designed for the purpose of assisting drivers to use it more efficiently. Yet, driver behaviour is not regulated by these or any other road network attribute (Pelekis & Skordilakis, 2012). Equally, even though enormous amounts of money are spent to construct and repair the road network (Buse et al., 2005) and vehicles are safer than ever, the behaviour of drivers is still far from ideal (Polydoropoulos & Kamargianni, 2010). Nowadays, the road network is more complicated, causing stress and anxiety to drivers. This may in turn lead to aggressive driving behaviour, low levels of concentration and increased collision rates (Christodoulaki & Bakatsaki, 2006).

Consequently, various prevention strategies are employed. Specifically, the police and mainly their traffic departments have a key role in preventing Traffic Code violations. While changing mindsets through traffic education is the long-term goal, organized and systematic policing can be an effective immediate prevention method (Agapakis & Migiakis, 2003).

In the case of Cyprus, the aetiology of road collisions is constantly under investigation. Police gather data in connection with each road collision under their jurisdiction. Non-serious or damage only road collisions are dealt with by insurance companies, whereas police mainly investigate those involving fatalities or serious injuries. They prepare descriptive reports on the number, type and causes of these collisions, which include data regarding the time that accidents occur, the persons involved, and the consequences (fatal, seriously or slightly injured and damage only). Nevertheless, factors relating to road collisions need to be thoroughly examined and substantiated correlations between the parameters involved and their effects must be established.

In view of the data relating to road collisions, the deficiencies, as well as the constraints arising highlighted in previous paragraphs, the following analysis was carried out.

Methodology

A literature review was initially conducted with regard to the theoretical background of road safety and its developments. Following this, a quantitative analysis of Cyprus Police raw data on road collisions between 1994 and 2016 was conducted.

Specifically, for each road collision reported and dealt with by the police, a specific printed form is used by the police officer visiting the scene to record all information, concerning the road collision, as well as the people and vehicles involved. All data recorded on these forms is then recorded electronically. Therefore, the statistical analysis conducted for this study was based on the main variables recorded on the relevant police printed form.

However, it should be pointed out that there were some gaps in the recorded data, particularly for the early years of the period 1994 to 2016, due to the absence of a digital data recording system. This has led to restrictions regarding the analysis of additional variables and levels. Nevertheless, the following analysis presents the most important attributes of road collisions in Cyprus.

Besides the descriptive statistics used for understanding and reporting the main variables and factors in road collisions, inferential statistical analysis such as the Pearson chi-square test ($\chi 2$) was applied using SPSS software, to further explore the relationship between dependent and independent variables. For simplicity purposes, only statistically significant results are presented, whereas other non-significant outcomes are omitted. Finally, the graphs and tables presented in this study were created using Microsoft Excel.

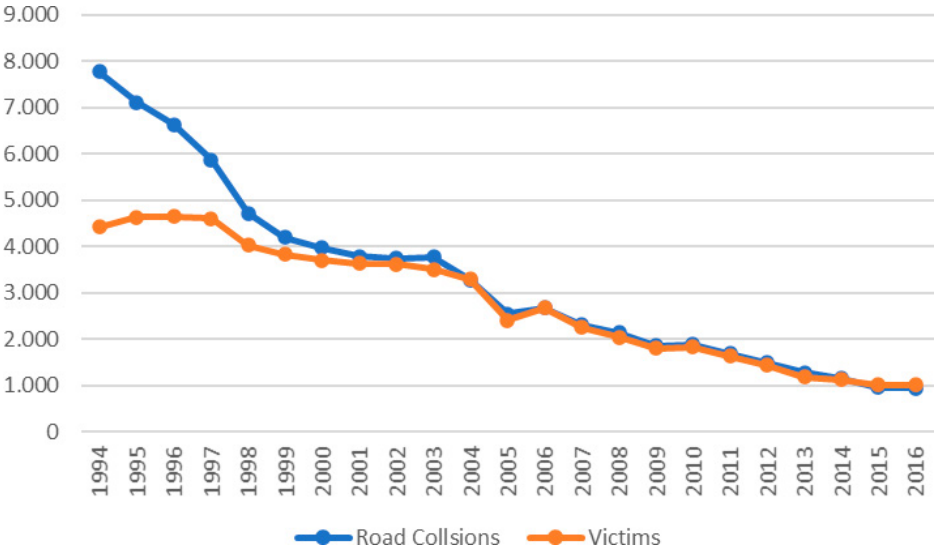
Data Analysis and Results

Various variables relating to road collisions were identified and examined within the framework of the study, including the following:

Trend over time

The analysis of the data collected revealed a decrease, both in the total number of road collisions and the number of fatally, seriously or slightly injured victims for the period 1994-2016. In particular, as shown in Figure 1, a total of 7,774 road collisions with 4,425 victims were recorded in 1994, while a total of 942 road collisions with 1,010 victims were recorded in 2016. A noteworthy reduction of 88% in road collisions and 77% in the number of victims is therefore observed.

Figure 1. Road Collisions and Victims (1994-2016).



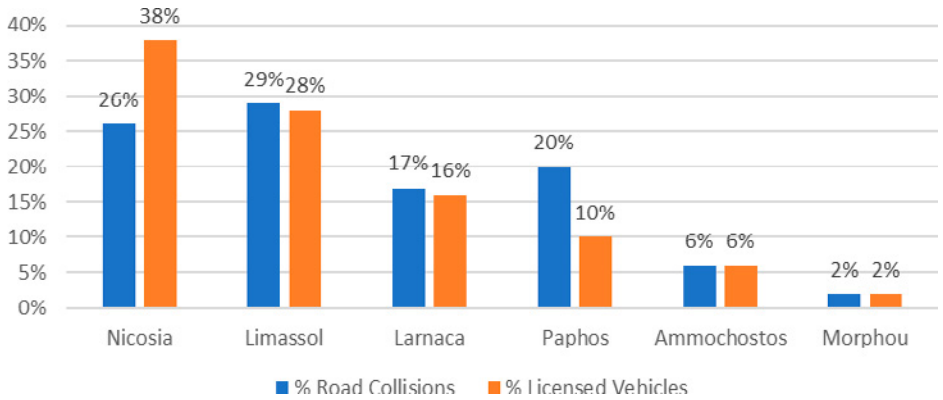
Overall, a significant decrease in all types of road collisions is identified (fatal collisions, serious and slight injuries and damage only). Of great importance is the reduction observed in the latter category of road collisions recorded by the police for the same period. This is attributed to the greater involvement of insurance companies in these cases.

The current analysis concludes that the number of both fatalities and injuries due to road collisions per 100,000 inhabitants decreased from 686 in 1994 to 118 in 2015, with a steady downward tendency in road collisions detected in all districts. These figures are discussed in further detail below.

Area

As shown in Figure 2, most of the collisions were recorded in Limassol and Nicosia, the largest districts in Cyprus, with 29% and 26% respectively. Interestingly, the rate of collisions in Nicosia (29%) was much lower than the percentage of licensed vehicles (38%). The opposite is noticed in Paphos where the percentage of collisions (20%) outweighs the percentage of licensed vehicles (10%). It is also worth noticing that the main categories of vehicles involved in the road collisions under investigation were cars (84%), motorcycles (12%), trucks (3%) and buses (1%).

Figure 2. Percentage of Road Collisions and Licensed Vehicles per District (1994-2016).

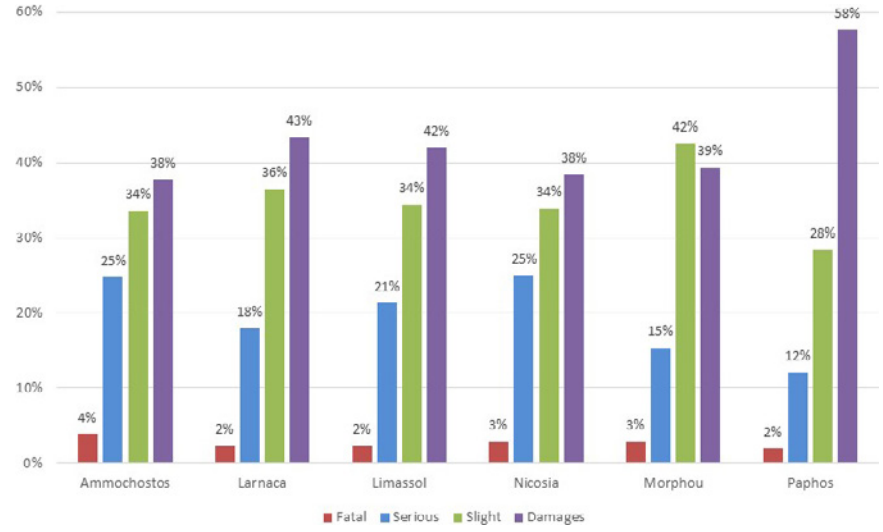


Moreover, after the relevant statistical test chi-square ($\chi 2$) was carried out, a significant association (p-value≤0.05) was found to exist between the severity of road collisions and the district where they occurred. Specifically, the percentages for the categories of fatal and serious road collisions in Ammochostos and Nicosia were higher in relation to those for other districts. As shown in Figure 3, the percentages for these two categories in Ammochostos amount to 4% and 25% respectively, while for Nicosia they were 3% and 25% respectively. The percentages of 3% for the fatal road collisions for the Morphou region and 42% for slight road collisions were also high. In contrast, in Paphos, the rates of fatal and serious road collisions were limited to 2% and 12% respectively, while a large proportion (58%) was recorded for road collisions with damage.

A further factor examined was the number of road collisions in relation to the time they occurred, that is, the day and the hour. Most road collisions occurred on Fridays and Saturdays (15% respectively), while the days with the lowest percentages were Wednesdays and Tuesdays. Unlike other road collisions, fatal road collisions present an increasing trend throughout the week to reach a peak on Sundays, with a percentage of 19%. With regards to the hours that the road collisions occurred, the analysis showed that most of them (7%) took place between the hours 17:00-17:59, while an important percentage was recorded in the afternoon, between 16:00-16:59 and 18:00-18:59 (6% and 7% respectively).

The majority of road collisions (63%) occurred during the daytime. A large number of collisions (27%) occurred at nighttime on roads with road lighting, while the percentage for accidents occurring at night on roads without road lighting was 6%. In the case of fatal road collisions, the rate recorded at night on roads without road lighting was 17%. In terms of the place that road collisions occurred during the period under study, the majority (83%) occurred in a residential area and 17% in a non-residential area.

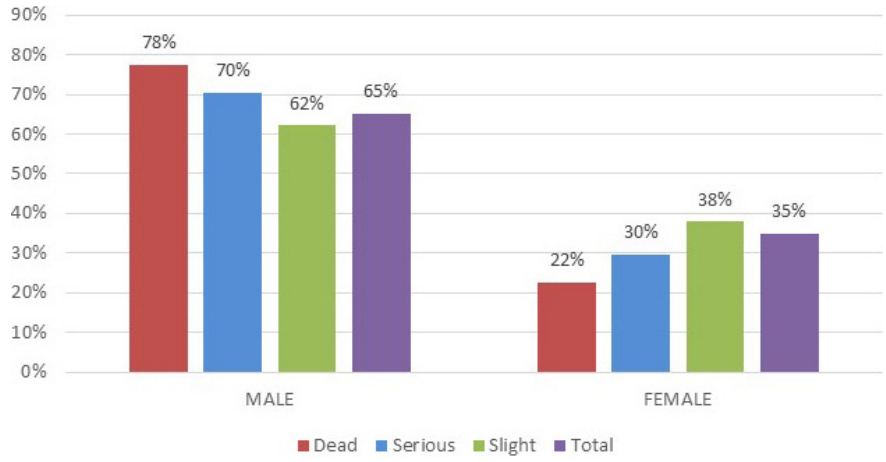
Figure 3. Severity of Road Collisions per District (1994-2016).



Victim demographics

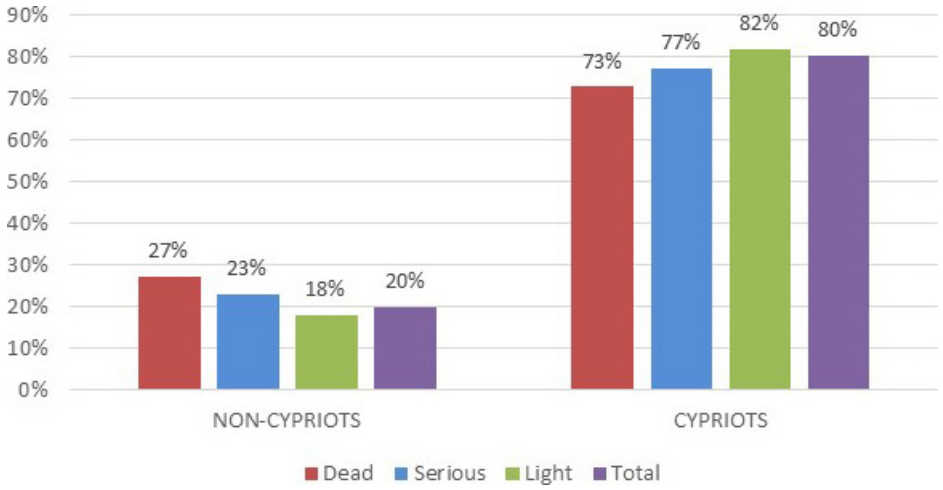
As far as the demographics of the road users are concerned, various points were observed. With regard to gender, the majority of the persons involved in road collisions were men (65%), while the rest (35%) were women. The relevant statistical test chi-square ($\chi 2$) revealed a significant association between the severity of road collisions and gender (p-value ≤ 0.05). As shown in Figure 4, more men were involved in fatal and severe road collisions, while the percentage of women involved was higher for non-serious collisions.

Figure 4. Victims by Injury Severity and Gender (1994-2016).



In terms of the nationality of the victims, as shown in Figure 5, 80% were Cypriots while 20% were nationals of other countries. The relevant statistical test chi-square ($\chi 2$) has shown a significant association (p-value≤0.05) between the seriousness of the road collision and nationality, with nationals of other countries more likely to be involved in fatal and serious road collisions than Cypriot nationals.

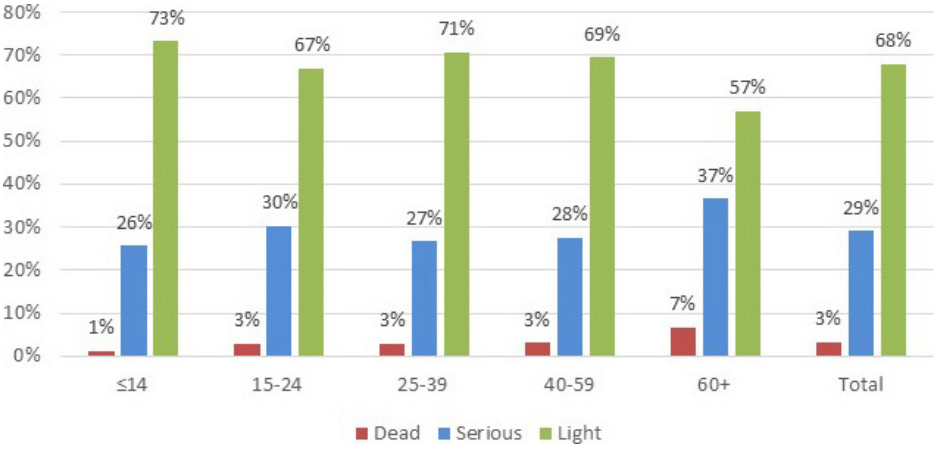
Figure 5. Victims by Injury Severity and Nationality (1994-2016).



With regard to the age of the victims of road collisions, most of them belong to the age group of 15-24 years of age (32%). The aetiology behind the collisions in which people between the ages 15-24 were involved includes distracted driving, speeding and the violation of traffic signs (13%, 12% and 11%, respectively). A significant relation (p-value≤0.05) was observed as well, after using test chi-square ($\chi 2$), between the severity of the road collision with the age group. According to Figure 6, a higher percentage of older people (60+ years) were involved in fatal and severe road collisions, with 7% and 37% respectively. The involvement of people between the ages 15 – 24 in serious collisions (30%) is high too.

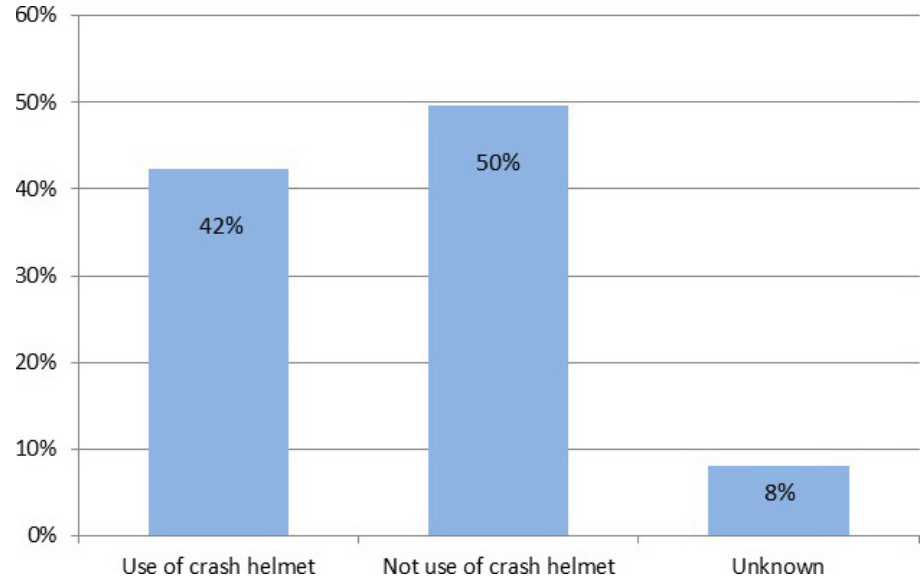
In line with the aforementioned, the main causes of road collisions identified for the period of 1994-2016, were negligent and reckless driving, not keeping a safe distance between vehicles, and traffic signal violations (12%, 11% and 11%, respectively). Likewise, for fatal road collisions, the main causes recorded during the above-mentioned period were speed, negligent and reckless driving, and driving under the influence of alcohol (20%, 16% and 15%, respectively).

Figure 6. Victims by Injury Severity and Age (1994-2016).



With regard to road users' behaviour, as shown in Figure 7, 50% of motorcyclists, who were involved in road collisions, did not use a protective helmet, with those who suffered a fatal road collision accounting for a percentage of 71%. Also, it is worth noticing that 71% of the drivers and passengers in vehicles involved in road collisions were wearing a safety belt, while in the case of the fatal road collisions, the respective percentage was only 29%.

Figure 7. Fatalities in relation to the use of Crash Helmet (1994-2016).



Finally, car drivers, passengers and motorcycle drivers (40%, 24% and 21%, respectively), were identified as the high-risk groups in terms of the status of the victims. The recorded proportion of pedestrian victims of 9% is also important and should be taken into consideration as vulnerable road users.

Discussion of Results

In the existing literature and statistical reports of the World Health Organization (WHO, 2018) and the European Transport Safety Council (ETSC, 2018), road collisions are identified as a major global public health issue.

A number of significant conclusions regarding road collisions have emerged from the findings of this study and the analysis of the Cyprus Police raw data covering the years 1994 to 2016. A declining trend was identified, both in road collisions and in the number of victims involved. However, despite the reduction observed, the problem remains serious. It is one of the main socio-economic issues of highest priority, both for society itself and Cyprus Police, as many human lives are still lost every year due to road collisions (drivers, passengers, cyclists, motorcyclists or pedestrians).

Further noteworthy factors regarding the high number of fatal road collisions, within the period under study, are the period of time (most were recorded in July) and the area they occurred (the majority were recorded in residential areas), as well as the demographics of the victims.

As most of the victims are men, belonging to the age group 15-24 years, Cyprus Police has developed road awareness programmes for this specific target group as well as even for the younger ages. Equally, another age group with high percentages for being involved in fatal and serious road collisions is the 60 years and older. The use of a relevant statistical test indicated a significant relationship between the severity of road collisions and the age group. Specifically, it became clear that the percentage of dead and seriously injured drivers in the 60 years and older age group is much higher than for the other age groups. Initiatives for this age group, such as closer monitoring or extended programmes directed at a wider audience should be considered.

Many of the causes leading to road collisions need to be further explored and the interventions applied should address them more directly. In an effort to record black spots on the road network, the Cyprus Police also uses the GIS system. This, however, does not fully represent the extent of road collisions in Cyprus, since minor road collisions are not usually recorded by the Police, but only by insurance companies. It is thus imperative to refer to the absence of a single database on road collisions (Insurance Companies, Contingency Chambers) and the need to create one. This would assist in maintaining a comprehensive record of the actual number of road collisions and the factors affecting

the overall problem in Cyprus. Equally, the existence of an integrated system for recording data on road collisions can make a significant contribution to the planning of actions, in terms of the prevention and the reduction of harm (before, during and after the collision).

Therefore, as the results of this study indicate and as documented by the findings of earlier international scientific research, the role of policing in the management of road collisions at a national level and the implementation of coordinated and multiple policing approaches are absolutely essential. Through strict traffic enforcement, policing can be a deterrent. This does not only translate into severer penalties, but also shifting policing methods towards specific directions using to-the-point strategies. Literature advocates also the implementation of systematic and organized policing for the enforcement of the Traffic Code (Agapakis & Migiakis, 2003).

Similarly, the police need to engage in wider programmes in society, such as providing incentives to citizens who respect the Traffic Code and specialized training and advice to road users, while the media must strongly support police measures and actions by publicising them. Generally, the police should make use of all the means at its disposal to promote its policing programmes, in its effort to reduce road traffic offences and the extent of road collisions and their consequences.

In line with the above and based on current literature, there is a need for further scientific study of the nature of traffic violations and, consequently, of road collisions at national level. It is also imperative to investigate the factors that lead to offensive driving behaviour and the risks taken by traffic offenders as well as by all road network users in general. The analysis of the economic, social and personal cost of the consequences of road collisions within the general population of Cyprus is also absolutely imperative.

Gaps have also been identified in relation to the modeling and evaluation of the impact (positive or negative) of the practices that have been applied in the field of road safety during the period under study but also of others that have followed. Unfortunately, this did not allow the assessment of any cost or result-benefit of the practices already implemented in the field of preventing road collisions.

Conclusion

The causes of road collisions in Cyprus are clustered primarily into three categories: human error, road environment, and the type of the vehicle itself. Most collisions, however, are attributed to human error, especially the road user's perception of danger and risky behaviour. These findings resulting from the analysis of the Cyprus Police data on the aetiology of road collisions correspond to those presented in international literature. The

causes identified include speeding, driving under the influence of alcohol, failure to wear a safety belt and protective helmets, violation of red traffic lights, as well as other Traffic Code rules. Generally, road safety issues involve people between the ages of 15 – 24, as well as people over 60 years old, while men seem to have a higher proportion of involvement in fatalities than women. Conversely, women are more often involved in non-serious collisions occurring mainly in urban areas than men. Moreover, the need for further research in the field of road safety at national level and the implementation of systematic proactive measures in terms of education, communication, and policing is obviously essential.

Additionally, further cooperation among stakeholders and more campaigns for increasing awareness should be considered. Lastly, the implementation of these suggested measures should be carried out on the basis of specific strategies, which should be supervised and evaluated in order to redefine actions. The role of policing in the management of road collisions is of great importance for society and should be considered as an issue of great priority.

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DISCUSSION

Road Policing as a European Union challenge:
Legal and operational aspects of police cooperation and cross-border enforcement

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Abstract
Traffic accidents are an enduring problem for traffic policing *in the European Union and stolen vehicles are a major crime fought traditionally by fighting vehicle crime.* Road Policing *is a new common concept referring to legal and operational aspects of* police cooperation *and* cross-border enforcement. Road Policing *shall have an effective role in reduction of numbers of deaths and injuries as well as a clear impact on other areas of concern like stolen vehicle, trafficking of illegal goods and human beings or illegal immigration. Introducing the concept of* "linear city" *helps to better understand the real importance of the* "road safety problem" *and to determine effective enforcement tools. The adoption and exportation of common best practices on* road safety *promise a significant increase in effectiveness. The creation of a new* Road Policing Agency *is a proposition to the European Commission.*

Keywords: *road policing, cross-border enforcement, police cooperation, police networks*

Introduction

Within the European Union (27+1) 720,000 motor vehicles are stolen each year, equivalent to about 1,970 per day, or 82 every hour (CARPOL, 2017). The financial value of the phenomenon amounts to over € 6.5 billion (EUROSTAT, 2017). At the same time, the 19,823 road fatalities in 2020 (ETSC, 2022) are the main cause of death for young people aged between 16 and 25 (ETSC, 2022; WHO/OMS, 2020). The common point between these two phenomena is the road. Stolen vehicles were part of *vehicle crime fighting* activity and traffic accidents, also as a result of traffic rule violations, were a challenge to *traffic policing* (EUROPOL, 2017; TISPOL, 2018). *Vehicle crime fighting* and *traffic policing* are the two sides of the same coin (Cestra, 2020; Hellemons, 2009).

The purpose of this contribution is to discuss whether a possible new concept of *"Road Policing"* and related activities can effectively have a role in reduction of deaths on the roads as well as a clear impact against traffic crimes including stolen vehicle trafficking (Adminaite-Fodor, Carson & Jost 2021; Castillo-Manzano et al., 2018; Townsend, 2018). A successful concept of *Road Policing* must be identified in a context of continuous development of police force activities. Police reforms, new police models, and police culture are important parts of a successful achievement of the objective. Analysing models as a common factor and using *lessons learned* by European Union Member States (EU MS) would contribute to the requests of citizens and communities to obtain better results. The topic of this study is identifying and evaluating the capability of the European Union to develop a *Road Policing Strategy including* effective *police cooperation*, able to merge capabilities for *traffic policing* with *"authority"* and *"executive power"*.

Our intervention is based on the hypothesis of studying and evaluating the possibility of developing a new concept of *Road Policing* as a single field of activity in the framework of *international police cooperation*, following the idea that the reduction of road fatalities and crimes on the roads is a specific EU target within the framework of *"Europe on the Move - Sustainable Mobility for Europe: safe, connected and clear"* (EU Commission, 2018).

Traffic policing is aiming at the respect for traffic rules and towards the possible reduction of road accident victims. V*ehicle crime fighting* refers to the fight against crimes on the roads and against trafficking in stolen vehicles. No specific literature on a possible common topic could be found so far (Bao et al. 2012; Cestra, 2019; Gössel, 2015; Scala I., 2017).

The present paper, also taking into account the development of the new concept of *"linear city"* (Angel & Rubio, 2017; Flores, 2019; Furundzic & Furundzic, 2012; Zaniboni, 2020), aims to define and underline the new *holistic* field of *Road Policing* (Cestra, 2020).

For us, it is a feasible *new approach* within the specific field of *traffic policing*, which is highly useful and takes into account continuous changes in society and in road and traffic safety and security. In the field of *vehicle crime fighting*, there is already a clear vision and expression of a *new concept* of *Integrated Police Cooperation* (IPC) as best practice at European level (EUROSTAT, 2017).
A key role is played by the capability of each EU MS Traffic Police Force to adapt its internal organization and structure, its cultural approach, and past models of cooperation to the new target.
The most important result is to complete the shift from a *traffic vision* of the problem to a more inclusive and effective *road safety vision* and the main target is the safety of road users based on full respect for both the administrative and criminal rules, and not only the security of the infrastructure which is mainly based on combating violations.

Methodological outline

Road Policing as a new *"holistic"* concept (Century & Cassata, 2016) is a challenge for the European Union in the field of police cooperation and *Cross-Border Enforcement* (Baldwin, 2018) to effectively save lives (Townsend, 2018) and decrease crimes on the roads (Vorotolina et al., 2015). The role of the new concept of *Road Policing* is a link between all police activities on the road, concerning both traffic rule violations and crimes. The research approach aims to improve police cooperation at the EU level and to implement it in the *"new"* field of *road safety* and the main tasks of the study are the following:

(a) Defining an effective *Road Policing concept*.
(b) Analysing *Road Policing* activity at the EU level.
(c) Determining tasks for EU level *Road Policing* activity within the Commission and Parliament framework.
(d) Defining possible aspects of useful police cooperation and relative tools and instruments.
(e) Creating a memorandum of *best practices* and *lessons learned* at EU level, in the field of *Road Policing*.
(f) Enhancing cooperation between concerned and affected police forces in the new field of *"Road Policing"* by providing common procedures at EU level.

The framework of the research is *exploratory/descriptive* (Babbie, 2017; Patten & Newhart, 2017) using the most important EU policy documents, with an explanatory development, but in several parts has been used an absolute *qualitative/compared* method (Hesse-Bieber & Leavy, 2011; Rivoltella, 2019), focused on empirical analysis of existing figures as well an *exploratory/quantitative* method (Ary et al., 2018; Babbie, 2017) referred to the evalua-

tion of the effectiveness of police cooperation at the EU level in the field of *traffic policing* and *vehicle crime fighting*.

Currently there is no specific literature on *"Road Policing"* (Cestra, 2020), but there are several relevant publications on traffic policing, vehicle crime fighting and on the new *"linear city"* structure.

Traffic policing is the activity of police and road authorities dedicated to checking respect for traffic rules and punishing violators (Andrighetto & Cecconi, 2010; Giannini et al., 2010; Tiengo & Bina, 2012; Townsend, Achterberg & Janitzek, 2006), and has a real impact on reduction of traffic accidents (Adminaite, Calinescu & Jost, 2019) and related social costs (Castillo-Manzano et al., 2018).

Vehicle crime fighting is police activity aiming to fight crimes committed on the roads (Bigo et al., 2015; CARSEC, 2018; Lai, 2018; Roach et al., 2017) and also contributes effectively to the reduction of stolen vehicle trafficking and other traffic related crimes (Hills, 2009; Hufnagel, 2013; Mac Gibbon, 2008).

International police cooperation in the field of *traffic policing* is actually against cross-border offences at EU level (EU Directive 2015/413, 2015; Frisani, Zamboni & Monteiro, 2016) and is based on the *Valletta Declaration on Road Safety*, signed on 29 March 2017.

International police cooperation in the field of *vehicle crime fighting* is within the framework of the European Agenda on Security with a specific role for the European Multidisciplinary Platform Against Criminal Threats - EMPACT (Ventrella, 2015) and *Cross-Border Enforcement* Directive 2015/413 (Frisani, Zamboni & Monteiro, 2016; Klimek, 2017).

In this framework, over the past few years a particular concept has been developed that defines highways and motorways as *"linear cities"*, increasing their assimilation to a *"traditional city"*, also in terms of prevention, control and *security police* activity (Orsini, 2012; Shadar, 2011; Tufek-Memisevic & Stachura, 2015; Zaniboni, 2020).

Studies in this field emphasize the following:

(a) the *"linear city"* is a new concept that involves the conception of roads as well as a city;
(b) the *"linear city"* has the same safety needs as the traditional city;
(c) threats to safety and security are the same in the two different environments;
(d) the ratio between number of police officers to employ in the *"traditional city"* and the *"linear city"* is 5 to 1.

Perspectives

Actually, ROADPOL (European Roads Policing Network)[1] as joint association between Traffic Police Forces is able to contribute to *traffic policing* aims in reduction of fatalities and accidents. Organizations like CARPOL (Network of Contact Points for the fight against Stolen Vehicle Trafficking) as a EU Law Enforcement Working Party (LEWP) sub-group are in a position to contribute to fighting *vehicle crimes* committed on the roads (European Commission, 2017). Based on a SWOT[2] analysis (Spapens, Hufnagel & Mc Cartney, 2017) as well as on a PESTLE[3] matrix (Barba, Sanchez & Segui, 2016; Lamas-Leite & De Brito-Mello, 2017) there are specific evidences of pan-European cross-borders operations (PECBOs) and CARPOL Joint Police Operations (JPOs), achieving successful results.

An effective police cooperation at the EU level (European Commission, 2008) can develop a sense of *"common purpose"* and provide new motivation for cooperation and innovation (Adminaite et al., 2018; Boylstein, 2018),.

The European Commission recognizes that it is appropriate to improve EU police cooperation in the field of *traffic policing* and *vehicle crime fighting*, and implementation of *"best practices"* is considered an effective action to obtain the best results in the field of police cooperation, using common criteria for evaluation of a new conceptual vision.

The concept of "road policing"

Road Policing is a new *holistic* concept reducing road accident victims and guaranteeing safety and security on the roads. *"Linear cities"* is a shared responsibility with several different actors (Zaniboni, 2020). To obtain this ambitious result it is necessary that all interested parties, i.e. local, regional and national authorities, and trans-national organizations and networks, vehicle manufacturers, insurance companies and road users, undertake a commitment to road safety as a structural part of the *new concept*.

The final target must be concrete and measurable in regard to lives been saved and criminals been hampered using highways and motorways for illegal activities. *Road Policing* is part of the overall solution for denying criminals use of the roads (Baldwin, 2018; Townsend, 2018).

Road Policing should have its best allies in technology and in a capacity to work together for a common task, pointing out that there are different high-level action areas connected with its use in enforcement (Hills, 2009).

1 As the political successor of TISPOL Organisation Ltd. (1996-2017) and TISPOL Network (2017-2019).

2 Strengths Weaknesses Opportunities Threats

3 Political Economic Social Technical Legal and Environmental

Road Policing, as a *new concept* (Cestra, 2020), must be able to:

(a) share, in the same platform, the two concepts of *traffic policing* and *vehicle crime fighting*, also adding *illicit vehicle administrative* activity;
(b) employ, for the same purposes, police operators belonging to different branches of Police Forces and with different backgrounds and training experiences;
(c) share safety requirements for all *Road Policing* operators, creating new police officers able to carry out all the police activities of *enforcement*, *prevention* and *patrolling*;
(d) direct the specific activity to safety and security for road users, according to the European Commission Directives and EU Parliament Decisions, as well to all other targeted indications that in this sense are formulated by specialized European and International Organizations;
(e) overcome the barriers given by national sovereignty and develop its activity through the correct and appropriate use of cross-border and pan-European instruments, first of all the Cross Border Enforcement Directive;
(f) unify the efforts made in the same direction even by different networks;
(g) project and evaluate the common effort to outline the possible creation of a European Agency able to be the only *"single control room"* at ultra-regional level for the common management of *road safety*.

The *European Road Policing Agency* to be established would face challenges like traffic police professionalization, modernization, transformation, application of modern operational standards and methods within the integral police development, integrated in a pan-European vision (Baldwin, 2018; Cestra, 2019).

There is a need for further development of the organization and function of an *European Road Policing Agency* especially related to further strengthening of the *"zero vision"* within 2050 and to prevent contemporary forms of crime such as *high-tech crime* and new forms of organized crime usi the EU roadside (Townsend, 2018). The aim of *Road Policing* is to improve at the same time and at the same level *road safety* and *law enforcement* on the roads of Europe.

Road Policing (Cestra,2020) considers the full need to work together in partnership to make EU roads safer and more secure and its fundamental values are underlined as follows:

(a) provide a *holistic Road Policing* service with the positive consent and support of the international community;
(b) strive to improve skill and expertise in order to make performances and results adequate to best international parameters and ensure a full professional image at all times;
(c) treat people and road users fairly and with high ethical standards;
(d) deliver road safety activities in a sympathetic and considerate manner, maintaining a duty of care to victims, witnesses and the public in general.

Conclusion

This article introduces at the EU level the concept of *Road Policing,* which is able to pursue an effective role in reducing deaths on the roads as well as having a clear impact on efforts against stolen vehicle trafficking and road crime fighting. The study shows the need for a change in vision to obtain best results. The authors suggest changing the approach from the old policing ensuring security and safety of infrastructures to a new more comprehensive and valid one, defending road users based on a different concept of road safety and security.

Following the new concept of *Road Policing* has been the reason for a decrease of about 3% in road fatalities within the last two years and an improvement in the presence of traffic police forces on the roads. In the field of prevention and pre-emptive activity, a better performance linked to the improvement of patrols on the roads and to the increase in the number of law enforcement activities for road rule infringements is visible.

Within this new *holistic* idea all the possible aspects of more useful police cooperation, identifying each instrument able to improve the joint activity in this specific field, starting from current dedicated networks like ROADPOL or CARPOL, and also developing the idea of correctly using the capabilities of CBE Directives and EUROPOL, FRONTEX, Agenda for Security or EMPACT. Much more important is the *Road Safety-Full Impact Assessment* (European Commission, 2008) and fundamental is the use of EUROPOL assets, first of all the Joint Investigation Teams (JITs), to work together to the same target.

A specific role in the development of a joint strategy within the new *Road Policing* concept has to be played by the creation of a memorandum of best practices and lesson learned, following the example of already existing manuals and booklets used by national and pan-national traffic police forces, under the supervision of the ROADPOL network for *traffic policing* and CARPOL for *vehicle crime fighting* activity.

The traffic policing activity at the EU level is actually defined as a system of joint efforts to decrease by 50% the number of fatalities on the EU MS roads, ensuring a bigger presence of traffic police patrols and developing a structured strategy able to provide more security and safety on the roads.

Among the most important activities, as effective results of cooperation , are pan European Cross-Border Operations (PECBOs) and Joint Police Operations (JPOs), targeted at *Road Policing* including traffic policing and vehicle crime fighting.The results of joint operations emphasize that full cooperation is the most effective added value in *Road Policing* and it is very important to cooperate using specific common instruments included in a pan-European tool, through an *informal bottom-up approach*. It is suggested that new strategies be implemented

like changes in tactics of national control operations, development of a sense of *'common purpose'*, providing new motivation for cooperation and innovation, with the development of spontaneous, organic coordination and cooperation on joint operations and legislation between members, outside formal activities. Cross Border Enforcement Directive 2011/82/EU, as replaced by Directive 2015/413/EU, assumes an important and strategic role for improvement of European police cooperation in the field of *Road Policing* , and an improvement of objectives and numbers of trans-national offences covered is recommendable.

It is also recommended *to propose to the EU Road Policing* as a whole *new concept* of a single field of activity, covering both fields of *traffic policing* and *vehicle crime fighting*, and it is desirable that only one branch of the police force shall be in charge.

Moreover, the suggestion to the European Commission is the evaluation of the following points:

- adoption of *Road Policing* as a strategic pillar within EMPACT;
- development of joint instruments of *police cooperation*;
- unification of the efforts made in the same direction by different networks;
- revision of the CBE Directive based on the *Road Policing* view;
- inclusion of *Road Policing* activities into the Serious Organized Crime Threat Assessment evaluation;
- planning and evaluation of new *"innovative solutions."*

Last but not least, this study can suggest adoption of a *European Road Policing Agency*, having a role as an activity and planning coordinator.

Contribution statement

The article is the result of a common research and reflection of the Authors. However, Introduction must be attributed to Zaniboni, E., Methodological outline, Perspectives and Conclusions to Cestra, P.

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ARTICLES

5G Technology: New Challenges for Law Enforcement Agencies to Face

Economic and Financial Police Senior Course[1]

Guardia di Finanza

Abstract

An ever-expanding digital universe, also thanks to 5G technology, is becoming an area of confrontation not only in terms of economic investment and resource allocation, but also with regard to risks in relations among countries and for national security. After briefly discussing the main features of this new technology, its impact on the global economy and the strategy developed by the European Union to map and regulate the phenomenon, this paper aims to identify the main challenges for Law Enforcement Agencies, with particular regard to the technical methods of lawful interception in Italy. In this perspective, reference is made to the criticalities posed by 5G technology in terms of end-to-end encryption, identification and localisation of users, virtual and fragmented architecture, "N.F.V." function, Internet of Things and authenticity of digital evidence. The possible answer to these issues, such as the fostering of A.I. tools, will have to be found in the awareness that international cooperation, in a borderless digital space further amplified by 5G technology, will have to be increasingly implemented.

Keywords: *5G, cybersecurity, digital evidence*

1 This article has been written in a collective effort as an outcome of a senior training course by the following Guardia di Finanza Officers:
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Introduction

The change brought about by digital transformation has already pervaded all areas of present-day society and the governance of this process is the most fascinating, complex and persistent challenge of the new millennium (Martino, 2018).
The current scenario is destined to undergo a further evolution due to the effect of 5G, a technology capable of bringing significant improvements to people's daily lives and fully supporting the development of new business models, including the whole range of IoT applications.
In such a submerged and entropic world, Law Enforcement Agencies (LEAs) must not only know how to orient themselves, but must also be able to use (in compliance with national and multinational rules and principles) the means of investigation made available by the ongoing innovation process and fully address the new challenges posed by 5G technology.

5G: the fifth generation of connectivity[2]

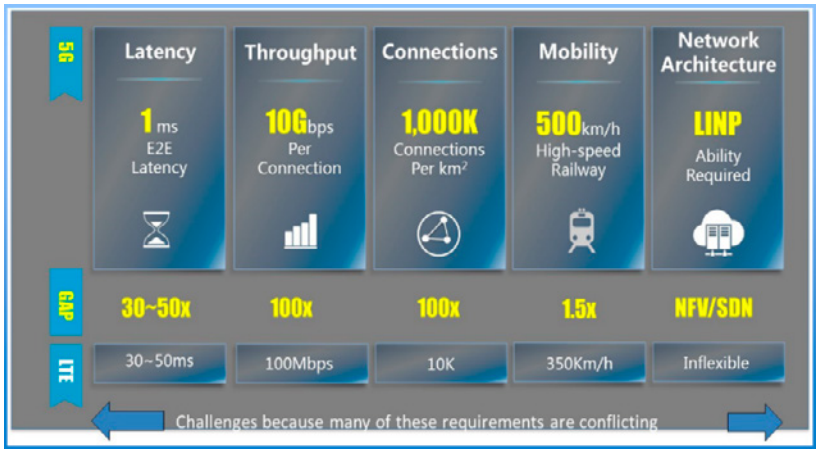
5G is not the evolution of 4G, but a real revolution in the field of communication and connectivity that brings with it extraordinary opportunities for socio-economic growth, new job possibilities and significant improvements in life-style not alienated, however, by relevant issues of interest for the Judicial Authority and the Law Enforcement Agencies. 5G, in fact, envisages significantly higher transfer rates through improved mobile broadband connections, shorter latency time, ultra-reliable connections and a secure Internet of Things (IoT)[3]. It is expected to become the backbone of a variety of business models such as interconnected and autonomous driving, telemedicine, smart grids, smart cities, and the full range of IoT applications, with a combined turnover of trillions of dollars.

2 5G is a technology capable not only of bringing significant improvements to people's daily lives, but also of fully supporting the development of new business models, such as interconnected and autonomous driving, telemedicine, smart cities and, more generally, the whole range of IoT applications. Given that 5g technology has taken on strategic importance in terms of national security for many member states, the European Union immediately set out to map the phenomenon and develop targeted policies aimed at achieving ever-greater technological autonomy and pursuing the so-called "digital sovereignty".

3 The concept represents an evolution of the use of the internet: objects (the "things") become recognizable and acquire intelligence given that they can communicate data about themselves and access aggregated information from others. Alarm clocks go off earlier in case of traffic, sneakers communicate time, speed and distance to compete in real time with people on the other side of the globe, medicine jars alert family members if they have forgotten to take their pills. All objects can take an active role by connecting to the network. By "thing" or "object" we mean more precisely categories such as: devices, appliances, plants and systems, tangible materials and products, works and goods, machines and equipment, which are characterized by certain properties or functionalities. The most important are identification, connection, location, ability to process data and interact with the external environment. The goal of the Internet of Things is to trace the electronic world map out the real world, giving an electronic identity to things and places in the physical environment.

The following chart shows what the main features of the 5G network are and, for each, the gap of the latter compared to the previous 4G/LTE network.

Figure 1



Source: Huawei.

Currently, on a worldwide scale, only 5 companies provide the radio access network to 5G, two of which are European (Ericsson and Nokia), two Chinese (Huawei and ZTE) and one South Korean (Samsung). The American companies are absent[4].
The new core-network[5] of 5G (5GC) was designed not by a single nation or a single manufacturer but globally by 3GPP[6], which completed the study of its feasibility in late 2016 and, in June 2018, ultimately established its technical characteristics that can be implemented by individual network manufacturers.

4 American companies, on the other hand, retain absolute primacy in terms of cloud data storage, followed by Chinese companies. This is the reason why the digital sovereignty over data, news and information of the world population (including the Italian one) is - and will be even more in the future - localized in the USA and in a small part in China, due to the fact that 5G technology is "cloud native". This raises pressing questions about the nature of personal data/produced by machines as a "public" good like water or air (absence of rivalry and exclusivity in their consumption).

5 A transport network (or core network) in telecommunications indicates the part of a telecommunications network responsible for transporting user data on a geographical scale, including MAN, WAN, international and intercontinental networks.

6 Third Generation Partnership Project (3GPP) is a collaborative agreement, signed in December 1998, among organizations involved in standardizing telecommunications systems in different parts of the world. The original objective of 3GPP was to produce technical specifications for a third generation mobile system based on the GSM Core Network and Universal Terrestrial Radio Access (UTRA) technology. Subsequently 3GPP was asked to review and improve the technical specifications for GSM to include more modern access technologies such as GPRS and EDGE.

Like the 4G Evolved Packet Core (EPC), the 5GC will aggregate data traffic from end devices while also being able to apply customized device mobility management policies before routing the traffic to the respective operator's services or to the Internet. Indeed, the similarities between the two technologies end here. On the contrary, among the main application clusters where the superior performance of 5G communications will be evident, there are the afore-mentioned Internet of Things ("IoT") as well as the Enhanced Mobile Broadband (e-MBB).

The most distinctive aspect that will emerge in this technological transition is that today the number of mobile users is minimal compared to the number there will shortly be with the advent of IoT.
Changing the paradigm from a few (human) users each with much traffic, to many users (human and machines) with little traffic each, the amount of data exchanged will be enormously higher but above all distributed.
Among the advanced services belonging to the category of Enhanced Mobile Broadband, there are all those applications that typically provide as key requirements to support extremely high throughput (even +10Gbps) and latency of fewer than five milliseconds, while providing reliable, quality and highly efficient services[7].
Further features that significantly differentiate 5GC from the previous technology are:

- The decomposition into Service-Based Architecture (S.B.A.)[8] elements, as it is designed for the separation of the user level that accesses a given service package, sharing it with other users of the same level;
- The inclusion of virtualized software-based network functions (or services) allocated within Multi-access Edge Computing (MEC) cloud infrastructures known as Mobile Edge Computing (see, among others, Arcep, 2017)[9].

The economic impact of the 5G network

It is difficult to determine the impact of 5G on the economy. This technology does not represent a sector, but a driving force for many other sectors (Cave, 2018). The effect that the COVID-19 pandemic may have on industries is also still unclear. While the pandemic, on the one hand, could constrain operator investment (for fear of limited consumer

7 These are, in particular, services related to the provision of advanced entertainment experiences, video and home automation such as immersive gaming experiences, e-learning and remote-training etc.

8 S.B.A. considers the fact that compared to previous generations, 5G network functions are designed from the outset with reference to IT technologies: where possible and convenient each 5G network element offers its functionality to other network elements in the form of micro-services. Signalling flows are realized by a sequence of services exchanged between network elements.

9 The MEC aims to create a standardized and open environment, providing servers with computational resources, storage capacity, connectivity and access to user traffic and network information typically not available and visible in legacy (dated, obsolete) equipment.

adoption), on the other hand, it is accelerating digital transformation, of which 5G will be a pillar in the coming years.

According to Ernst & Young – EY (2019), the effects of the new networks will translate - in the next 15 years - into additional annual growth of the Italian GDP by 0.3%. For a positive impact of 5-6 billion euros.
This positive impact is expected to be around 80 billion euros of GDP increase over the 15 years considered. However, this scenario should be seen in the light of the possible effects of the restriction to a few 5G technologies suppliers not belonging to the EU, following the assessments related to the use of "Golden Power"[10].
A study conducted by Ericsson (2020), which produces devices for the 5G network, predicts that the 5G consumer market could be worth 31 trillion dollars by 2030 globally[11].
The key findings also highlight how COVID-19's impact on personal finances and economic priorities may have influenced consumers' willingness to pay a premium price for 5G subscriptions. At the beginning of 2019, the average consumer was willing to pay 20% more for 5G. As the end of 2020 approached, that rate dropped to 10%.

An overview about European risk assessment and management

5G is the technology that will mainly expose citizens, businesses and governments to security risks in the coming years (see, among others, Rigitano, 2019). For this reason, the European Commission has launched an "action plan" that invites States to a coordinated approach at the European level to avoid possible "flaws" that could contaminate the whole Union.

On 26 March 2019 therefore, the European Commission issued a recommendation[12] in which it set out a series of measures to be followed to ensure a high level of reliability of future 5G networks across the European Union.

10 Golden Power is nothing more than a kind of shield designed by the Italian government to protect the activities of certain sectors defined as strategic, including, for example, national security or defence. It has found application with the Decree Law 15 March 2012 n. 21, by which the government has the power to oppose the purchase of certain holdings or to dictate specific conditions on the matter, and can also veto the adoption of particular corporate resolutions on all those companies (both public and private) considered "strategic".

11 The study finds that operators could earn $3.7 trillion of the total, a number that may increase further as new opportunities generated by adjacent digital services emerge. The report also estimates that operators could earn revenues of up to $131 billion by 2030 from digital services alone, proactively marketing and bundling 5G use cases. Approximately 40 percent of these revenue projections are attributed to consumer spending on advanced video, augmented reality (AR), virtual reality (VR), and cloud gaming over 5G networks.

12 Recommendation (EU) 2019/534 - Cybersecurity of 5G Networks.

On 9 October 2019, Member States, with the support of the Commission and ENISA[13], published a report on the EU-wide coordinated risk assessment of cybersecurity risks for fifth-generation (5G) networks. The highlights of the EU-wide coordinated risk assessment identify as many important security challenges[14] that may become apparent or more prominent in the context of 5G networks compared to the situation in existing networks.
Threats to network integrity will become major security concerns: in addition to threats to privacy and confidentiality, the expected conversion of 5G networks into the backbone of many critical computing applications will make the integrity and availability of these networks central national security concerns and a significant security challenge at the EU level (Robles-Carrillo, 2021).
To complement this report, on 21 November 2019, ENISA published a threat landscape mapping, which consists of a detailed analysis of certain technical aspects, particularly the identification of network assets and the threats they are affected by. After reporting an analysis of the context, this document describes in detail the assets used for 5G, identifying for each the potential impacts in terms of loss of confidentiality, integrity and availability.

On 29 January 2020, the N.I.S. Cooperation Group published the EU toolkit including risk mitigation measures, which addresses all risks identified in the Coordinated Risk Assessment Report. The EU toolkit identifies and describes several strategic and technical measures, as well as corresponding supporting actions to enhance their effectiveness that can be implemented to mitigate the identified risks.

Critical 5G issues related to law enforcement activities

On 6 May 2019, the European Council, also taking a cue from Europol's position paper n. 8268/19[15] on 5G, highlighted many critical aspects from the point of view of the Judicial Authority and LEAs; several issues resulting from the advent of the 5G network must be considered.

13 ENISA, the European Union Agency for Cybersecurity, is a centre of expertise on cybersecurity. It helps the EU and EU member countries to be better equipped and prepared to prevent, detect and respond to information security problems. It provides practical advice and solutions for the public and private sector in the member states and for the EU institutions.

14 These challenges are mainly related to:
- to key innovations in 5G technology (which will also introduce several specific security enhancements), in particular the important part of software and the wide range of applications and services made possible by 5G;
- the role of vendors in the implementation and use of 5G networks and the degree of dependence on individual vendors.

15 Position paper on the implications of the upcoming 5G technology for law enforcement in Europe, presented by Europol at the Law Enforcement Working Party (LEWP) meeting on April 15, 2019.

The attention is very significant in Italy, also because it has never been possible to technically regulate the modalities of interception or, more generally, the provision of mandatory services under article 96 of the Italian Electronic Communications Code, as demonstrated by the current problems on VoLTE[16].

Reference is made to the inter-ministerial decree of 28 December 2017, which in article 7 established at the Ministry of Justice a permanent technical table whose existence, composition and activities are ignored to the present day.

Therefore, it will be necessary to regulate the functional requirements for lawful interception of communications on 5G's fragmented and virtualized architecture, otherwise access to valuable investigative data will be lost.

Specifically, the issues highlighted by the European Council document are related to the following specific areas:

1) encryption;
2) the fragmented and virtual architecture;
3) the authenticity of evidence;
4) the availability of the network from the point of view of law enforcement.

With its high reliability and low latency, 5G therefore offers great potential to replace the old networks, but it must be kept safe from cyberattacks and made compliant with the needs of justice, therefore, with the requests of the Police and the Judicial Authority made in the performance of their activities. In such a perspective key, it emerges at first sight the potential impact of 5G developments on the need of Law Enforcement officers to intercept legally.

End-to-end encryption in the context of lawful interception

Communication with end-to-end encryption (E2E) is a system whereby only the people who are communicating can read the messages. In principle, it prevents third parties, including internet service providers and telecommunications network operators, from reading or altering messages exchanged between two people.
In practice, intermediaries are not allowed to gain access to the encryption keys, thus preventing attempts at surveillance or alteration of exchanged messages.

16 VoLTE (voice over LTE) is a technology that enables voice calls to be established over LTE (4G) networks based on the IP Multimedia Subsystem (IMS) architectural model. The use of VoLTE makes it possible to establish voice calls of better quality than in the past thanks to the wider bandwidth reserved for conversations. The voice is therefore more faithful to the original (where dialogues are with a voice quality that is sharper and isolated from surrounding noises) and, consequently, all this translates into greater clarity of the conversation itself.

In many messaging systems, including email and many chats, messages pass encrypted "in transit" through intermediaries and are stored – "in the clear" – by third parties, from which they are retrieved by the recipient.
This allows the third party to provide additional functionality, but it also means that the messages can be read and misused by anyone who has access to them on the third party system.

The purpose of end-to-end encryption is to prevent data from being secretly read or modified, except by the real sender and the real recipient. Thus, messages are encrypted by the sender, but the third party has no means to decrypt them and stores them in encrypted form.
The recipient retrieves the encrypted data and decrypts it himself. Since no third party is able to decrypt the communicated or stored data, this type of encryption guarantees security from one end of the transmission to the other.

Consequently, even when a message must pass through potentially insecure nodes, it is still protected from disclosure during its transit.
Having said this, if adopted as the only standard within 5G technology, end-to-end encryption would – at present – make it impossible to access the contents of electronic communications through lawful interception[17].

User identification and localisation

IMSI[18] is the individual cell phone card number that is sent in a background during each communication process and can be used to identify and locate the mobile phone device. Two critical issues will complicate the use of IMSI numbers for investigative purposes in 5G environments.

17 Even the well-known "Trojan virus" should be re-engineered to operate on the new 5G network, with great limitations concerning the specific crimes for which they can be used legally. Thanks to this spyware, it is possible to read the messages exchanged just as if the user were holding the phone of the target in his/her hands. Trojans operate independently of the type of encryption used to send and receive messages.

18 IMSI stands for International Mobile Subscriber Identity. It is a number that uniquely identifies each mobile phone user of GSM or UMTS networks. The number is stored in the SIM. It is sent from the mobile device to the network and is used to check the other details of the mobile terminal in the HLR (Home Location Register) or copied locally in the VLR (Visitor Location Register). To prevent those who have subscribed to the service from being identified and tracked by "eavesdroppers" on the radio interface, the IMSI is sent as infrequently as possible and a randomly generated Temporary Mobile Suscriber Identity (TMSI) is sent instead. The TMSI is the number that the mobile station uses to interface with the GSM network, replacing the IMSI, to ensure user confidentiality.

The first issue is due to the encryption of IMSI[19]. Law Enforcement Authorities will no longer be able to locate or identify the mobile phone/device, or better, they will no longer be able to associate a device with a specific person.

The second problem is the development of mechanisms to allow both the providers' mobile network and the users' mobile devices to detect "false" base stations[20] (the so-called "ephemeral cells" that also generate IMSI catchers).

IMSI catchers are in fact indispensable for carrying out legal surveillance of persons who frequently change their SIM (Subscriber Identification Module) card in order to identify the respective means of communication/Sim card used and thus to monitor them. Consequently, there is a danger that the execution of technical investigations and surveillance measures could become extremely complex and costly.
Therefore, there will certainly be the risk that the most important operational and tactical investigation tools (IMSI catchers mounted on cars or drones etc.) will soon become obsolete or even worse, useless.

Virtual and fragmented architecture

With 5G, different network and service providers could be able to operate through virtual networks for the exclusive use of each, but created on the same "common" physical infrastructure: each service provider will use a customized virtual layer with different technical specifications (the so called "Network Slicing")[21].
Therefore, information deriving from the monitoring of communications could not be available in every section of the network, thus jeopardizing the technical activities of the police that would reach the operators only partially and in any case in an incomplete way.

In practice, with the 5G network, service and network providers cannot – if they are not required to – have a complete copy of the available information, which would make lawful interception impossible.

19 Encryption of the IMSI number would make it impossible for Law Enforcement and Judicial Authorities to identify mobile devices or the location of criminals or pose a serious threat to national security, as well as potential victims facing such a threat. Without access to the IMSI number, lawful eavesdropping based on this parameter will not be possible. 5G will have rigorous authentication processes (to identify a user before they are granted access) that will make it more difficult for law enforcement to conduct the investigation undetected (e.g., current IMSI catchers needed for mobile device detection and suspect location cannot be used).

20 These mechanisms correct a design error related to the management of "level 2" of the network stack that allowed Law Enforcement to learn about IMSIs through *ad hoc* technical tools.

21 The customization of virtual networks is done to meet the specific needs of applications, services, devices, customers or operators. Network slicing will maximize the flexibility of 5G networks, optimizing both infrastructure utilization and resource allocation. This will enable greater energy and cost efficiency than previous mobile networks.

Multi-access Edge Computing (MEC) will also allow mobile networks to store and process content in decentralized clouds in close proximity to network users, who will be able to communicate directly with each other[22].
Therefore, information will not necessarily be directed through central nodes, where today interception is implemented (so called "fragmented architecture"). In order to carry out lawful interceptions in the future, Law Enforcement Agencies will have to ask for the collaboration of several network providers both at home and abroad, where some elements of the fragmented architecture could be allocated (Sharevski, 2018).

The establishment of an international cooperation may extend the time lapse between the request and the implementation of the interception, with a not negligible risk of losing a complete copy of the information.
There is also the possibility of "private sections" held by "private third parties" who may not be obliged to cooperate with the justice of one or more countries, especially in contexts of international cooperation where there are often important mismatches between the criminal laws of the countries involved.

In any case, the existence of a network division represents a potential criticality since fragmented information may not be available or accessible for subsequent uses permitted by law.

NFV function

In addition to the criticality in the field of access to the content of the communication such as identification and localization of users, 5G brings with it another impact profile on the activities of law enforcement, arising from the virtualization of physical resources that are part of the network (the so-called Network Function Virtualization – "N.F.V.").
Consequently, all the special security measures related to personnel and infrastructures that protect the confidentiality of the "physical" nodes, will be cancelled.
This means, for example, that criminals can employ or execute attacks to access and even change phone numbers (destination lists) that must be monitored.
In addition, functions performed in one country can now be moved abroad: for example, maintenance of mobile pyramids, provision of central management services (e.g. customer/user databases), thus making it (negatively) necessary to move lists of phone numbers/people to be monitored to other countries.

22 It will enable mobile network storage and content processing near "cellular network participants" to achieve faster response times. As a result, terminal devices may - in the future - be able to communicate directly with each other without having to use the network operator's core network. This direct communication between users will lead to consequences in terms of data recovery for uses required by law. The content and identifiers of communications will no longer have to be routed through central nodes, meaning that information may not be available or accessible to law enforcement.

The effort to be made, in this context, is to provide the Law Enforcement Agencies engaged in interceptions with confidential and intact information and data, with particular regard to the "target" lists.

Internet of Things and authenticity of evidence

There will be a huge mass of data in circulation at a whirling speed, and a large number of objects connected thanks to the IoT. Law enforcement agencies may need to intercept not only a communication between two people but, for example, also those between a subject and a connected, remote driven object.
The huge multiplication of the speed of communication and, consequently, the amount of data in circulation, can generate confusion.
Once the access problem of the police or intelligence operator has been solved, the hyper-connection foreseen by 5G risks to find a mass of phony or useless data.
Given the multitude of actors involved in providing 5G networks, it could be much more difficult to establish the authenticity of evidence and distinguish false from real evidence.

For the Italian Court of Cassation, in fact, IT data contained in the computer, as representative of things, fall among the documentary evidences set forth in article 234 of the Criminal Procedure Code[23].
Therefore, any IT document can constitute digital evidence (Casey, 2017), but there are digital evidence that are not necessarily identifiable in IT documents: among these, certainly, the "flows" of communications.

Given that it is possible to affirm the traceability of digital evidence in the field of documentary evidence, its use in the evidentiary field requires, however, an adequate and careful verification by the judge on the authenticity and genuineness of the computer data. This in light of the fact that the following characteristics of digital evidence will be elevated to the nth power by 5G technology:

- immateriality, they are nothing more than IT data, in the form of binary code (bit strings), stored in physical media (such as computers) or floating in the Internet. In virtue of this aspect, digital evidences are not tangible (Daniele, 2020)[24], and for their existence it is not necessary a specific computer support because they are autonomous and independent from the "thing" that contains them, being able to be duplicated and reproduced infinite times;

23 Court of Cassation, Section III, No. 37419, July 5, 2012, CED 253573 – 01.

24 *"This does not mean that they do not have a physicality of their own: conceptually, they are electrical impulses that respond to a pre-established numerical sequence and that, when conveyed in a computer support with a memory, originate intelligible information. It is, however, a physicality that, in the absence of the support, cannot be perceived as such".*

- promiscuity, corollary of immateriality, i.e. the ability of electronic evidence to contain not only data related to the commission of crimes for which an investigation is launched, but also potentially an unlimited number of irrelevant data for the investigation that may also concern aspects of the private life of certain individuals[25] or data transmitted by connected objects;
- fragility, since they can be altered, modified and definitively eliminated either by the user who created the digital evidence, or by careless and inexperienced investigators. In fact, it is essential that the process of evidence gathering is conducted with the use of highly specialized techniques so as not to pollute in any way the detected evidence but also to provide for its safe and effective preservation (see, among others, Anglano, 2015);
- difficulty of retrieval, in fact, digital evidence are dispersed in multiple "computer places", which with 5G will no longer be just servers or computers located in different parts of a state or in multiple states. Obviously, this feature generates issues regarding the location of data storage and the subsequent competence and jurisdiction of the investigation holders, both nationally and internationally (Chiavario, 2006)[26].

Conclusion

It is therefore necessary to prepare new technical rules as soon as possible in agreement with all the operators in the sector, starting with the concession holders and network managers.
However, we will also need new laws to guarantee the continuity of the judicial police and intelligence functions. These legislative provisions will all have to be built by the Parliament and the Government in synergy with the most interested ministries: Interior, Economic Development and Justice.

In the authors' opinion, the tools provided by Artificial Intelligence (A.I.) represent a great opportunity to keep up with the times and seize the full potential offered by technology to optimise one's work. To do this, it would be advisable to:

25 In particular, digital investigations potentially affect the freedom of correspondence and communication (art. 15 Const.), as well as the right to respect for private (and family) life protected by art. 8 ECHR and art. 7 of the Charter of Fundamental Rights of the European Union. In addition, the right to the protection of personal data is also affected (art. 8 of the aforementioned Charter of Fundamental Rights of the European Union).

26 For this reason, it is useful to establish rules applicable in as many jurisdictions as possible (hopefully global in scope) so as to avoid conflicts of jurisdiction between investigating authorities but also conflicts regarding the circulation of evidence. An efficient system of international cooperation between states in the circulation of evidence and investigations is extremely necessary if one wants to fight cybercrimes in a profitable way. Indeed, cooperation between investigative authorities and private individuals, especially companies rather than individuals, is becoming increasingly important.

- set up databases already in use by Law Enforcement Agencies to work synergistically with A.I. and develop new ones based on A.I. and machine learning;
- train operators from recruitment onwards in the use of A.I;
- legislate in such a way as to reconcile the functioning of justice with the privacy needs of citizens and the rights of freedom of expression and information;
- establish clear rules to avoid opaque (machine-based) decision-making processes that may adversely affect the freedom and security of citizens and due process.

In any case, the objective of developing effective and efficient solutions at national level as soon as possible must be combined with a continuous strengthening of international cooperation[27]. First of all, it would be desirable for Member States to take a common stance towards 5G technology providers, given that at present, despite the alarm bells being raised by many (see, as far as Italy is concerned, COPASIR, 2019), there are uneven approaches.

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27 It is absolutely essential, in fact, to have efficient information exchange tools between states, in addition to those that can be activated by judicial means, in order to anticipate the moment of intervention with respect to investigative evidence that has yet to be fully proven.

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Broadening Situational Awareness - An ecological dynamics approach on officer safety and officer safety training

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Abstract

Dealing professionally with the potential for violence that exists in the police profession is part of the everyday tasks of police officers. Geared towards the German situation, the concept of officer safety, which is anchored in training and practice, provides the central orientation for this.

The paper argues for a comprehensive understanding of officer safety from the perspective of ecological dynamics, which directly affects the scope of situational awareness and associated training. We argue that the key means of officer safety is professional communication in a broad sense, with the use of means being highly context dependent. As such, violent communication respectively the use of coercive force as communication can be just as necessary as verbal and non-verbal de-escalation, physical proximity be appropriate as well as distance. Navigating professionally through this context-dependent complexity requires a broad understanding of situational awareness that extends the recognition of possible danger cues. We conclude by outlining several practical implications for police officers, police training and police organizations.

Keywords: *officer safety; police training; professional communication; police use-of-force; ecological dynamics*

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Introduction

Everyday police situations can alter from one moment to the next. A document control at the airport, for example, can be amicable, but it can also escalate in a split of a second. The situation can return to normal, but it can also turn out violent and endanger the physical integrity of the police officers. Front-line policing has a structural potential for normality *and* violence (Bennell et al., 2021; Ellrich et al., 2011; Ellrich & Baier, 2014b; Jager et al., 2013; Koerner & Staller, 2022; Renden et al., 2015). Within these police-citizen interactions police officers play a decisive role in shaping and determining the actual course of events (Reuter, 2014). The professional management of interactions is part of their everyday work.

Within this task, the concept of *officer safety* is regularly focused upon within German (Füllgrabe, 2017) and international policing (Abrahamsen & Strype, 2010; Thornton & Pepper, 2020). We argue in our article – that at least for the German context – officer safety based on situational awareness (Füllgrabe, 2017; Lorei, 2021; Ungerer & Ungerer, 2008) is too narrowly conceptualized, funneling behavioral options for police officers way to far towards the use of physical means. We present our argument by first discussing the concept of officer safety and laying out the theoretical framework of ecological dynamics, which broadens the perspective on situational awareness in the context of officer safety. We then go on to discuss how this broad conceptualization of officer safety effects the training of situational awareness in police training. We conclude with practical implications on several levels for police institutions.

Officer safety

The guiding principle of officer safety for the professional and training practice of police officers in Germany is reflected in *Police Service Regulation 100* (PDV 100) and in *Guideline 371 - Self-Protection in Police Service* (Guideline 371). PDV 100 defines officer safety as the "tactically correct behavior in operations to prevent or reduce danger to forces" (PDV 100, 2012). In the sense of this conceptualization, officer safety is to be thought of comprehensively. As a central behavior related to the preventive or acute avoidance or reduction of self-harm by police officers, officer safety is a permanent aspect of professional police conduct. Thus, self-protection includes *all* behaviors and options for action of police officers that contribute to preventing or reducing hazards toward the officer during operations. This broad understanding has far-reaching consequences, as it opens up the view that officer safety includes the legitimate use of force as well as communicative de-escalation.

Professional communication as key means

In training and further education of police officers, officer safety is often related and reduced to the use of forceful options, at least in Germany. It is then about the use of command and operational means as well as physical defense and restraint techniques. The dominant conceptual and practical identification of officer safety with use-of-force options becomes evident, among other things, at the organizational and structural levels. In Germany, officer safety and de-escalation measures are usually offered separately within police training (Ellrich et al., 2011). The organizational separation of these two relevant behavioral options suggests – at best – an additive understanding of competence development at their deployment: on the one side, professional communication, on the other side, the legally warranted use of force (Lorei, 2021). Such a division, however, has little to do with the reality of operational demands. In front-line policing, "communication" and "violence" are complementary and move along a sliding continuum of behavioral options, which can practically overlap and replace each other in everyday work (Reuter, 2014). An isolated focus on separate behavioral options runs the risk of overlooking the integrated character of these options in functionally fulfilling operational demands.

On a closer examination and according to the understanding of social systems theory (Luhmann, 1995), the distinction between "communication" and "violence" is also blurred. The use of violence is *communication with physical means*, among others; talking is *communication in the medium of language*; the use of facial expressions and gestures is non-verbal *communication with the means of body language*. In all cases, it is about the expression of information that finds a social connection, i.e. is taken up and reciprocated in this or that form and in this or that medium. Thus, violent behavior is communication by definition, too (Luhmann, 1995). Through the lenses of social systems theory, communication can therefore be seen as the basic medium of police officer safety. Violence as communication and communicative de-escalation are its manifestations in practice.

Ecological dynamics

A conceptual framework that is both useful for theorizing officer safety and capacitates empirical analyses of it too, is provided by *ecological dynamics* (Araújo & Davids, 2011). According to this perspective, successfully applied in contemporary psychological and sports performance research, individual behavior results from the continuous perception- and experience-based interaction with the environment, which is thereby changed and reshaped (Gibson, 1979). For example, in the context of a large-scale demonstration the action of a police officer, who empathetically shows understanding for the emotional state of indignation in the behavior of an outraged citizen during a document control, works to enforce the measure and in doing so carries out preventive officer safety: Recognizing the affect, based on situational awareness for the emotional state of the person, and interacting empathetically changes the situation at hand, which in turn influences the next citizen's behavior (e.g. perceiving the police officer not as opponent). Police be-

havior and context of behavior are situationally coupled, they co-produce each other. In this context, officer safety is a facet of operational action for the purpose of avoiding danger, based on being situational aware in a broad sense.

The concept of constraints (Newell, 2020), which simultaneously enables and limits behavior (Torrents et al., 2020), specifies the relationship between perception, behavior and context. A distinction is made between the constraints of the environment, the task, and the individual:

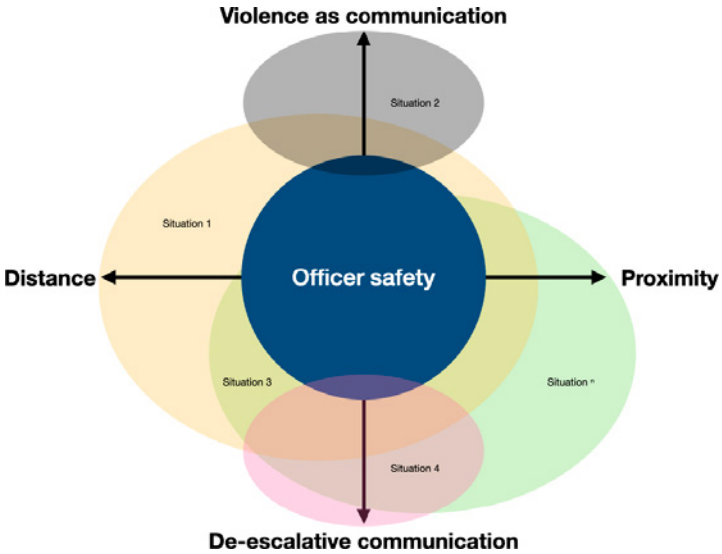
1. The behavior of the citizen forms a constraint in the police officer's environment, against which his or her own behavior is in-formed, i.e. literally put into shape. The constraints of the environment also include colleagues and third parties involved, but also ambient factors such as light and weather conditions or spatial structures. Approving or disapproving gestures, noise, or the sudden appearance of third parties, e.g. filming on their mobile phones etc., form environmental constraints and provide potentially relevant information on which the police officer's actions and officer safety must be based.
2. The fact that the police action takes place in the context of a social mandate for preventive danger aversion, which, in this case, takes the form of establishing personal details, builds a task constraint. Constraints of the task provide a framework that defines the scope of police action. These constraints, which fundamentally and situationally form action, also fundamentally include the normative-legal guidelines of police work.
3. Whether and how the constraints of the environment and the task resonate in the police officer's action and, if necessary, nuance it in the direction of self-protection, depends on the constraints of the individual. Current attention, energetic resources, motivational and emotional state, former experiences, motor, tactical and communicative skills, knowledge and attitude form the central individual frame of reference for the perception and evaluation of environment- and task-related constraints and subsequent behavioral options (e.g. officer safety).

Thus, from the perspective of ecological dynamics, officer safety in the context of policing consists of an adaptive, functional *relationship* between the police officer, their environment and the task (Araújo & Davids, 2011), which must be permanently reassessed by the police officer and is actively shaped by constraints. Empirical data indicates that functional officer safety is context-dependent and domain-specific, resulting from a broad perception and flexible handling of situational requirements (Boulton & Cole, 2016; Körner et al., 2022; Preddy et al., 2019; Rajakaruna et al., 2017). Which line for action and which tool is right or wrong can, therefore, only be determined in the concrete application context and the unique situation (see Figure 1).

Distance, for example, is not per se the recipe for preventive officer safety. If a police officer on duty perceives signs of desperation in a citizen's behavior in a conflict situation – e.g. facial expressions, body language, and words - the right solution could be to gently establish proximity. The basic recommendation for the greatest possible distance (Metzler, 2015; Schmalzl, 2012), which is often formulated for officer safety in dealing with people in psycho-social crises, cannot be agreed with as a general rule. Proximity, including physical touch, can have a stabilizing function in such personal crisis situations (Szymenderski, 2012).

Proximity embodies emotional access and sends the signal "I am with you, I am helping you", "I am protecting you" (this is the main task of policing activity). The message can be reinforced through empathic communication and the application of active listening skills, based on being situational aware of the citizen´s extraordinary state and related nuances. However, this should not be viewed as a standard recipe. The assessment can be flawed, environmental factors or inner psychological states can have a stronger influence on the behavior alone or within the interaction. If the citizen lashes out, officer safety requires a quick switch, possibly the effective and legitimate use of coercive means, like restraining. Under alternative contextual and situational conditions, the very opposite to proximity can be the right procedure for establishing officer safety. If the citizen shows signs of fear, distance and gaining time are among the options for action. Increased physical proximity accompanied by aggressive demands and the initiation of coercive measures could well escalate the situation further.

Figure 1. Context-dependency of officer safety



For officer safety, all generalizations should be treated with caution. Operational interactions between the police and the citizens are characterized by a complexity (Cojean et al., 2020) that defies simple linear behavioral algorithms (Staller & Koerner, 2020). Officer safety involves a broad perception and understanding of the complexity of the respective operational situation and requires the ability to adapt to the situation. Thus, officer safety is context-specific. Not only varies it according to the situation, but also according to the area of deployment. Officer safety presents different demands to regular officers and officers in special units (Koerner & Staller, 2021). The latter must, therefore, be trained and (re)learned in a domain-specific manner.

Mindset

De-escalative communication and violence as communication are possible situational tools of officer safety. The individual mindset of a police officer is the central constraint of these action possibilities (Boxer et al., 2021). In the light of the ecological dynamics, the way police officers act in specific situations depends on their personal mindset. In addition to the general personal attitude towards the people, the society, the professional understanding of the role of police officers is a key component for officer safety. This mindset includes the specific attitudes that have to do with the professional role and the related typical tasks and fields of action of police work. Within international research on cop culture, the debate on the warrior versus guardian mindset picks up the basic mindset of police officers (Stoughton, 2015, 2016).

While the warrior mindset encompasses a warrior-like attitude, in which the world and people are viewed primarily from a danger perspective, the guardian mindset represents a protector-oriented attitude that emphasizes the service of, and a positive relationship with, the citizens (Staller et al., 2019). The mindset of police officers can also encompass both mentalities in varying degrees (McLean et al., 2021). In this context, research shows that the warrior mindset is associated with a higher potential for conflict and use of force and a lower priority for de-escalating communication (Reuter, 2014).

Situational awareness

From the perspective of ecological dynamics, functional officer safety derives from the individual perception and use of relevant information at the operational situation in question which is based on individual experience. As a skill to be learned, it consists of the flexible coupling of behavior with the situational context and the requirements of the task. The interface for this is the perception of relevant information, which forms the basis for functional, context-adapted self-protective actions (Koerner & Staller, 2020b).

For police officer safety, the role of situational awareness is emphasized regularly (Schmalzl, 2012; Körber, 2008; Füllgrabe 2017). Situational awareness is a crucial resource for officer safety in the context of complex operational situations (Nota & Nota, 2019; Boulton & Cole,

2016; Preddy et al., 2019a). The range of sources of information that are possibly relevant from the point of view of situational awareness is wide, like facial expressions, gestures, gaze behavior, statements of the citizens, hand position, distance, environmental factors.

In the literature on situational awareness, the topic is mainly scrutinised in the context of the assumption of an omnipresent potential of danger, threat and violence emanating from citizens (Füllgrabe, 2017; Ungerer & Ungerer, 2008). In order to survive in the dangerous world of police work, it is argued that a kind of "danger radar" (dt. „Gefahrenradar") is required (Füllgrabe, 2017). Situational awareness, thus, consists primarily of the reception and processing of visual and auditory information, which, in the service of "survivability" (Füllgrabe, 2017), allows the gaze to oscillate tactically, in anticipation of omnipresent danger, between the citizen's hands, the body position, the interaction distance, and the environment (Ungerer & Ungerer, 2008).

In view of recent research on conflict and violence dynamics in policing (Ellrich & Baier, 2014a) as well as findings on the connection between police attitudes, perceptions, and actions (McLean et al., 2019; Wolfe et al., 2020), the functions and consequences of constructs such as "danger radar" and "survivability", which have been prevalent within German police training and education, should be critically reviewed in order to enhance a more reflective approach to officer safety. The sources of information utilized in an operational situation, what is perceived as information and how it is evaluated, is moderated by the individual mindset. The mindset of police officers is a powerful distortion and filter that enables and limits officer safety (Koerner & Staller, 2020a).

The construct "officer safety" is multidimensional. It includes adaptive behavior and flexible solutions that are controlled by situational awareness as the perception of the action-guiding information relevant to the situation. However, officer safety starts with one's own attitude, which influences the attentional focus and the selection of cues within a given situation. In this respect, an important task for police officers is to become aware of these connections, to reflect on their own perceptual and action-guiding assumptions and values and, thus, to revise their own understanding of themselves, the world and their role. This refers to the important role and responsibility of officer safety training.

Enhancing situational awareness skills in police training

Officer safety "requires regular training" (Guideline 371, p. 10; see also Jager et al., 2013). Although training measures are popular among emergency forces (Ellrich et al., 2011), they are not sufficiently included in further training and sometimes only represent the requirements of operational practice to a limited extent (Jager et al., 2013). Especially the

aspect of representation is crucial. In order to support the police officers in the further development of their self-protection skills, the training must gradually encompass situations, tasks, features and stimuli "like in the field" (Staller et al., 2017). Only then it will be possible for the trainees to perceive and act in the training in ways that are necessary and possible in the field for the purpose of self-protection.

The crux of the matter is therefore the question of the real requirements in the field. However, there is lack of reliable quantitative and, above all, qualitative data on concrete interaction processes and characteristics of the conflict-situations in policing (Reuter, 2014). This knowledge deficit is problematic, since it effects the construct of officer safety as well as the related training. For instance, empirical data from Germany (Ellrich et al., 2011) reveal that police officers who have participated in training for officer safety have a higher victimization rate in the area of serious violence than the non-participants. Contrary to expectations and intentions, the training presumably does not reduce the risk of victimization and increase the self-protection and safety of police officers, but has the opposite effect.

A possible explanation for this could lie in the described undercomplex conception of officer safety within the context of use of force options, which goes hand in hand with a certain idea of the practice of police operations. While there are clear empirical reasons for conceiving officer safety in terms of the potential danger police officers are exposed to, longitudinal data indicate that the assumption of a steady increase in violence against police officers cannot be confirmed, in general (Reuter, 2014; Staller & Körner, 2019; Tammen & Behn, 2018). This means that, as a rule, a high proportion of non-threatening operations in the field can still be assumed. On the other hand, recent research on conflict and violence provides evidence that violence in police operations often arises as a constellation effect. In addition to the citizens involved and the characteristics of the situation, police officers also play a role in the development and the course of violence (Ellrich & Baier, 2021; Ellrich & Baier, 2014b; Reuter, 2014).

In contrast, training that treats the danger in police operations as omnipresent and externally caused, and therefore focuses primarily on violent solutions for officer safety, not only misses the point of everyday reality, but possibly also reproduces the idea of the dominance of omnipresent dangers and, therefore, puts the focus solely on the use of coercive tactics - an idea that, in turn, influences action (Huesmann, 2018a). It is known from aggression research that aggressive behavior is mediated by beliefs and attitudes. Those who assume, that the world is a dangerous place, interact with the world along this belief (Huesmann, 2018b). Studies show that people with such a worldview more often assume bad intentions towards other people and more often resort to violent actions than people with a positive view of the humanity and the world (Dodge et al., 2015). This could be an explanation for the fact that officer safety training measures unintentionally

increase the participants' exposure to violence and, thus, miss the stated goal. Officer safety, as described above, starts with one's own attitude towards the world and people.

The ecological dynamics approach not only enables a theory-based description of officer safety as a highly variable and context-dependent operational behavior. The approach also provides a concrete orientation for the planning and design of training for officer safety that meets the operational requirements and focuses on the ability to use different solution options in complex situations.

Practical implications

Officer safety is a priority in policing. For this very reason, it is important that the theory and practice of officer safety is continuously aligned with scientific evidence. The evidence from recent violence and conflict research as well as the framework of ecological dynamics offer numerous update potentials at all levels of decision-making and action.

Police organizations are recommended to consistently follow the guiding principle of a reflective approach on officer safety. Reflective officer safety includes a continuous update culture and revision of existing knowledge and concepts derived from current research. Police organizations should recognize the context-dependency and diversity of solutions for self-protecting actions and support them by offering integrative training and further educational initiatives. The basis for this is a domain- and application-specific circularization of training and development oriented towards problem-solving competences.

Police officers understand officer safety as a context-dependent, multidimensional expertise that includes situationally different behavioral options in the context of complex operational situations and that has to be learned domain-specifically according to the respective working context (street police, cyber police, special forces etc.). The perception of relevant contextual information enhances the functional officer safety. This can include means like physical proximity and distance as well as use of force and de-escalative communication.

Officer safety as a functional adaptation to the demands of the situation depends on the individual frame of reference. This requires, among other things, situational awareness. Police officers reflect their self-protection and safety skills and prerequisites. This fundamentally involves being aware of the connections between one's own actions and one's personal understanding of oneself, the world, the people and one's profession.

Finally, *police trainers* are advised taking the comprehensive understanding of the officer safety into account in training practice. The content of training must meet the require-

ments of officer safety through representative task designs covering the broad range of situational solution options available to police officers, especially the principle of the situational and context-dependency of officer safety. The approach of ecological dynamics offers an effective model for analysis and design (Koerner & Staller 2020b). Reflective trainers promote police officers' self-reflection, especially with regard to the connection between officer safety and the personal understanding of their role and role-conduct.

Conclusion

Officer safety is a fundamental aspect of professional police conduct. In this article, we argue for a comprehensive, ecologically informed understanding of officer safety that encompasses all preventive and normatively permissible measures to secure the physical integrity of police officers on duty.

The use of safety tools depends on the situation and context. Officer safety in the context of complex operational situations can require distance as well as closeness, violent communication as well as communicative de-escalation. In addition, the construct of officer safety is multidimensional. It is based on situational awareness in a broad sense, which in turn is conditioned by police officers' understanding of themselves, the world and their roles, which influences their perception and actions like a filter. Officer safety is context-specific and must be (re)learned accordingly. The training of officer safety involves the task of providing police officers with a comprehensive and reflective approach to this facet of professional policing.

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CONFERENCE CONTRIBUTIONS

Challenges of the COVID-19 Pandemic for Policework, Training and Education: A Portuguese criminal investigation professionals' perception

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Abstract

The COVID-19 pandemic has created several challenges for police forces. Whether or not the police can successfully respond to these challenges depends on several issues. These must be identified to improve the police work's impact on each community and society. Laufs and Waseem (2020), in a systematic review on best practices for police response to COVID-19, identify four different contexts related to this issue: 1. Police-community relations; 2. Psychological and mental wellbeing of police officers; 3. Intra-organizational challenges; 4. Inter-organizational collaboration and cooperation. Policing in a pandemic context has changed the type of relations between police officers and the community considering possible variations in crime patterns. Also, officers' proximity with infected persons can be identified as one more daily stressor associated with police work. To mitigate the difficulties, adequate training and education must be set up to improve new competencies that can help police officers cope with anxiety about personal risks and develop new professional strategies to investigate crimes. To improve the knowledge about the changes and challenges related to the Covid-19 pandemic in the Portuguese Judiciary Police, the Institute of Judiciary Police and Criminal Sciences has conducted a national-level study. The research was conducted in all the 14 departments of the Judiciary Police using an online questionnaire based on a review of the literature. Several issues were identified considering the criminal investigation professionals' perception about the changes in

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crime patterns, identification of stress factors related to police work and challenges related to training and education strategies to be implemented.

Keywords: *Covid-19 pandemic; police work; police training*

Introduction

Considering the pandemic situation of Covid-19 and the restrictions imposed on the police forces, several are the challenges that this kind of institutions faced during 2020. Concerning the police forces' missions (e.g., public order, law enforcement, criminal investigation) the main challenges came from the community and society. Changes regarding the police-community and inter-organizational collaboration and cooperation relations are the most critical impacts of the Covid-19 pandemic context and, consequently, all the internal adjustments made by the police forces to respond to that. Thus, police officers' psychological and mental well-being and the presence of new stressors and the intra-organizational challenges regarding the police new management and work strategies are the main internal issues related to the pandemic situation (Laufs & Waseem, 2020).

Policing in a pandemic context has changed the type of relations between police officers and the community concerning the variations in crime patterns associated with the lockdown and changes in the relationships between the police and other institutions related to the criminal investigation such as courts, prison system, victims support institutions or hospitals (Laufs & Waseem, 2020).

Social isolation is a common consequence of the COVID-19 pandemic and represents a major threat to mental health (Banerjee & Rai, 2020). In police work this issue can also be identified in several police departments. Also, the police officers' proximity with infected persons can be identified as one more daily stressor associated with police work (Brooks & Lopez, 2020).

Police training and education can be considered as essential strategies and tools to mitigate the difficulties and improve new competencies that can help police officers cope with anxiety about personal risks and develop new professional strategies to investigate crimes.

To study the impact of the pandemic context in police work, the Institute of Judiciary Police and Criminal Sciences has developed research to improve the knowledge about the changes and challenges related to the Covid-19 pandemic and promote the identification of training needs of the Portuguese Judiciary Police. To accomplish this main goal, several specific aims were defined: 1. Identification of police officers' perception about work con-

ditions; 2. Identification of police officers' perception about changes in crime patterns; 3. Police officers' psychological and mental wellbeing assessment in pandemic context; 4. Identification of needs and challenges related to police training and education.

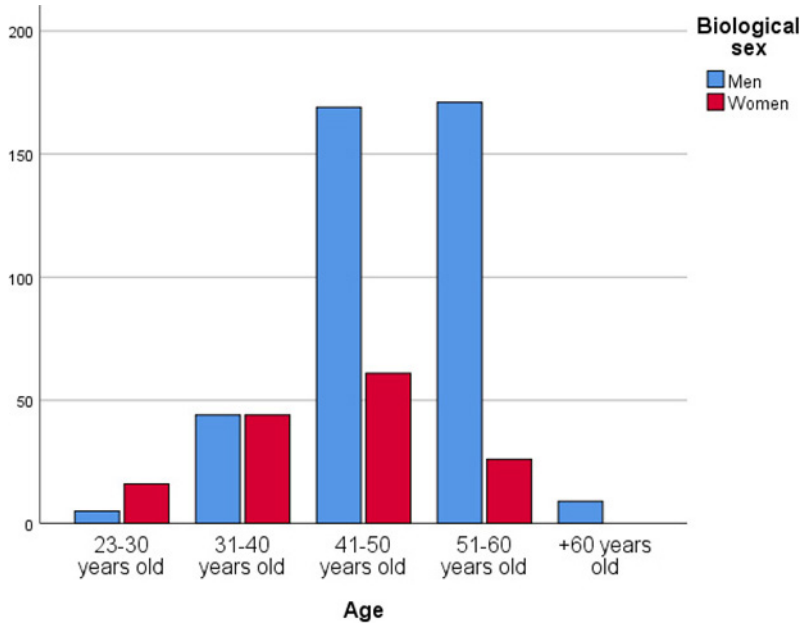
Methodology

Participants

The participants work at the Portuguese Judiciary Police (PJ), a higher criminal police force to assist the judicial and prosecuting authorities in criminal investigations. PJ is responsible for the criminal investigation of serious and violent crimes such as homicides, sexual crimes, terrorism, kidnapping, robbery with firearms, human trafficking, corruption, money laundering, international drug trafficking, slavery, and arson.

Regarding the pursued methodology it was developed comprehensive research that was conducted in the PJ accomplishing the following research sample: 547 criminal investigators have participated in the study, being 72,8% Men and 26,9% Women. The distribution between men and women in this sample is similar to the distribution in the PJ. 42% of police officers integrate the group with 41-50 years old, 36% the group with 51-60 years old and 16% the group between 31-40 years old (Graphic 1).

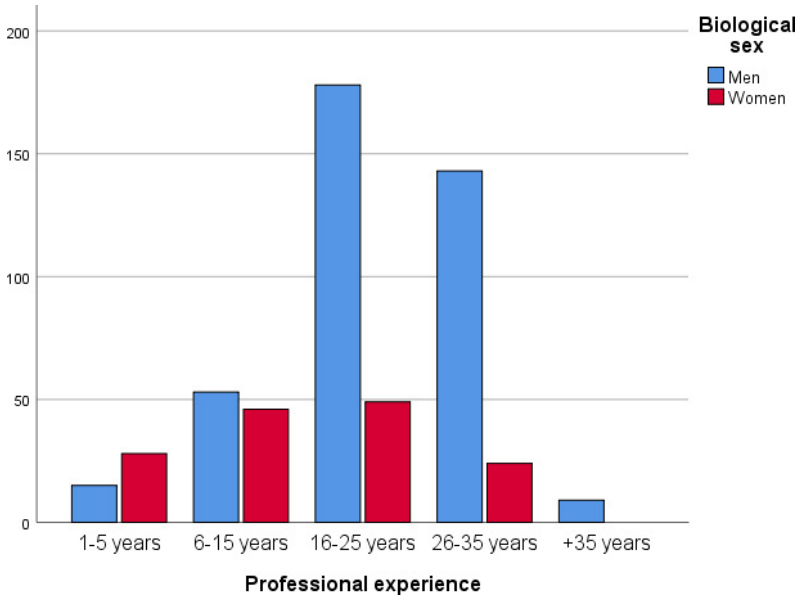
Graphic 1. Distribution of age considering the police officers biological sex variable



Considering the type of department, it is possible to identify that 40% work at a Directorate, 32% at a Central Unit and 24% at a Department of Criminal Investigation.

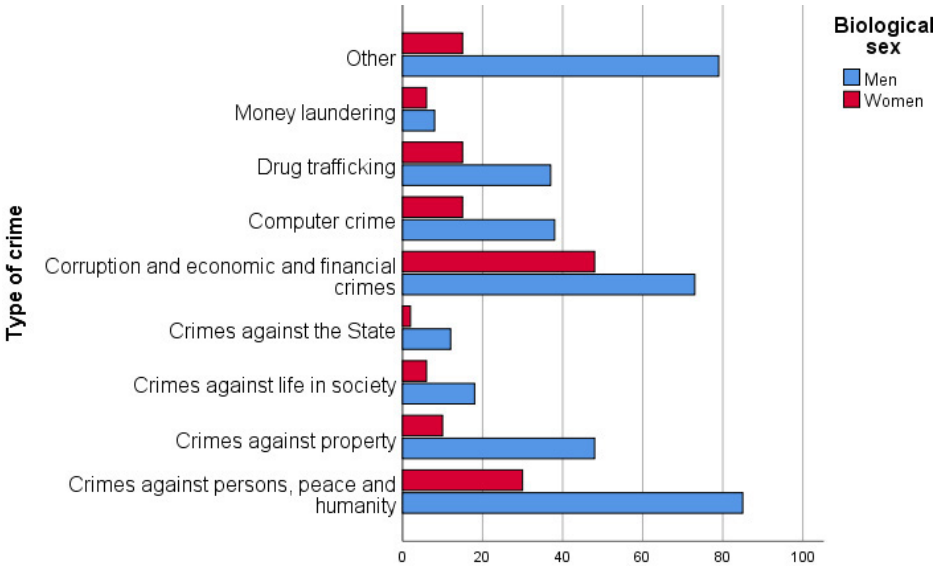
Analyzing the variable professional experience, 42% integrate the group of 16-25 years of police work experience, 31% integrate the group with 26-31 years of professional experience and 18% the group with 6-15 years of professional experience (Graphic 2).

Graphic 2. Distribution of years of professional experience considering the police officers biological sex variable



The variable type of crime investigated indicates that 22% of the police officers work in crimes of corruption and economic and financial crimes; 21% crimes against persons, peace, and humanity and 11% crimes against property (Graphic 3).

Graphic 3. Distribution of type of crime investigated considering the police officers biological sex variable



Instruments

An online questionnaire was organised in three different parts. The first part was developed according to a systematic review of the literature with keywords as Covid-19 pandemic and police work to assess the criminal investigation professionals' perception about changes in crime patterns and work conditions in the pandemic situation regarding the Covid-19. The second part presents the primary goal of assessing police officers' psychological and mental well-being and the new stressors regarding the police new management and work strategies related to the pandemic situation. The Professional Quality of Life Scale (ProQOL; Stamm, 2010) was used in this study to measure compassion fatigue, or the physical, mental, and emotional state experienced by police officers during the last months.

A third part has the main goal of identifying the perception of challenges related to training and education in order to define new guidelines and strategies to improve the police training and educational process.

Procedures

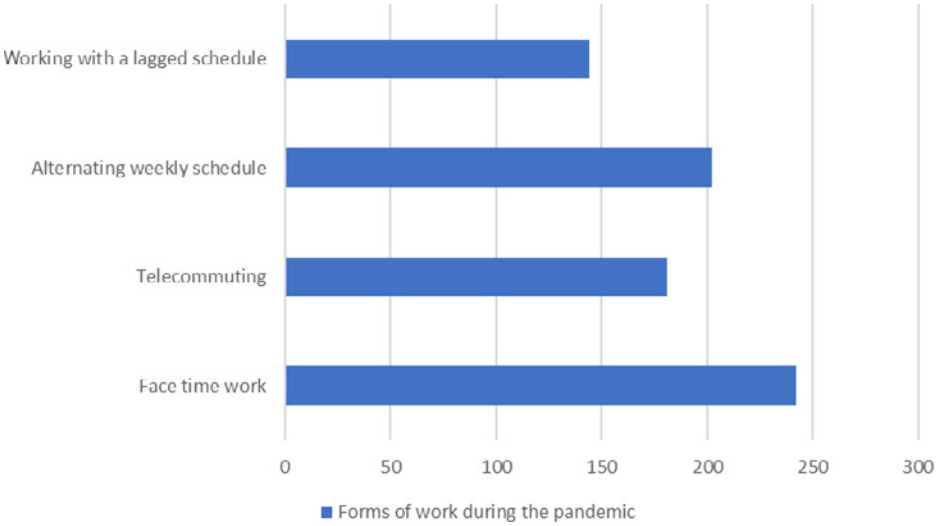
The research was conducted in all of the 14 departments of the Judiciary Police, using an online questionnaire and addressed to criminal investigators from the Portuguese Judiciary Police, placed in different units nationwide. The research team considered all the confidentiality and ethical issues regarding the collection and analysis of data.

Results

Criminal investigation professionals' perception about work conditions

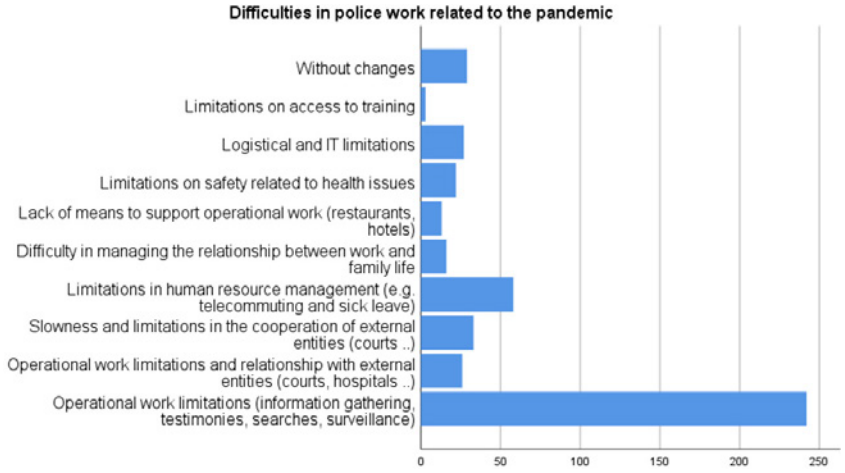
The analysis of the police officers' perception about changes in work conditions in the pandemic situation regarding the Covid-19 indicates the presence of several new *forms of work organization* to respond to the pandemic context. In Graphic 4 it is possible to identify the most representative solutions concerning the work organization's pandemic challenges: alternating weekly schedules (36,9%), telecommuting (33%) and working with a lagged schedule (26%) are the most representative results presented by the police officers research sample. However, the face timework still represents 44% of the forms of work organization identified by the police officers in order to accomplish their professional goals, even in the pandemic context.

Graphic 4. Forms of work organization during the pandemic



The analysis of the police officers' perception about the *main difficulties during the pandemic* identified some limitations shared by *police officers investigating different types of crime* ($\chi2=113,08$; $p = .001$) and in *all types of police departments* ($\chi2=98,34$; $p = .001$). The most important are the limitations related to operational work (information gathering, testimonies, searches and surveillance) (51%), limitations in human resources management related to work organization (12,6%) and slowness and limitations in the cooperation with external entities (e.g., courts) (7%) (Graphic 5).

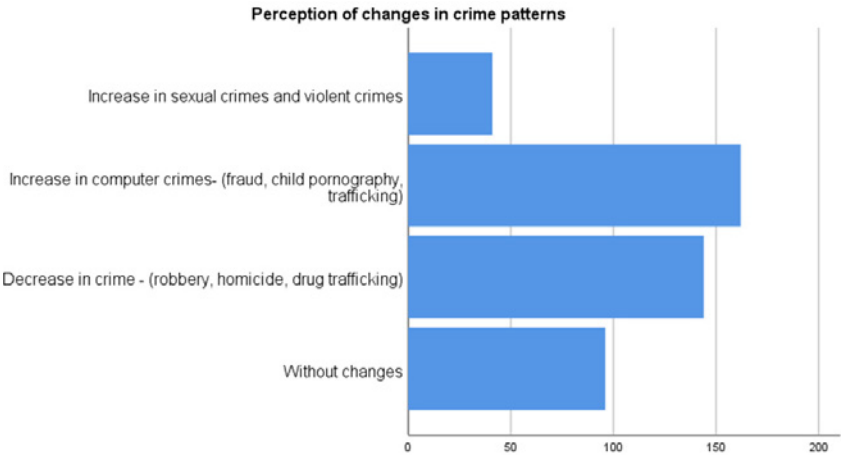
Graphic 5. Difficulties in police work related with the pandemic



Criminal investigation professionals' perception about the criminal patterns' changes

The perception about the *changes in crime patterns* is shared by police officers investigating different types of crime ($\chi 2=109{,}55$; $p = .001$) and in all types of police departments ($\chi 2=21{,}33$; $p = .011$). The essential changes identified are the increase in computer crimes in several areas (fraud, child pornography and trafficking) (36,6%), a decrease in violent crimes as robbery, homicide, and drug trafficking (32,5%). A group of 21,7% of the police officers do not indicate any changes in the crime patterns investigated by their department (Graphic 6).

Graphic 6. Police work perceptions of changes in crime patterns during the pandemic



Police officers psychological and mental wellbeing assessment in pandemic context

The Incidence of Compassion Fatigue (CF) is assessed by analyzing the level of Burnout and Secondary Traumatic Stress. The analysis of Table 1 shows a low/ moderate level of burnout and a low level of secondary traumatic stress presented by the police officers' sample. In a positive way, the police officers sample presents a moderate level of compassion satisfaction (level of pleasure-driven from being able to do the work well). No statistically significant differences were identified between men and women regarding the incidence of compassion fatigue and compassion satisfaction.

Table 1. Police officers' level of Incidence of Compassion Fatigue and compassion satisfaction

	Compassion Satisfaction	Burnout	Secondary Traumatic Stress
M	39,28	22,82	20,93
DP	5,86149	6,09925	5,64201
Level	**Moderate**	**Low/moderate**	**Low**
N	495	496	489

The analysis of the impact of the type of crime investigated by the police officers indicates that the professionals working with crimes against the state, computer crimes, money laundering, corruption, economic and financial crimes present a moderate level of burnout (Table 2) when compared with the other police officers working in departments as crimes against people, peace and humanity (*M*=21,405; *SD*=4,881) or crimes against like in society (*M*=22,782; *SD*=6,522).

Table 2. Police officers' level of Incidence of burnout considering the type of crime investigated

Types of crime	Burnout			
	M	DP	*F*	*p*
Crimes against the State	24,61	6,198	2,322	0,019
Corruption and economic and financial crimes	24,18	6,302		
Computer crime	24,24	6,918		
Money laundering	24,33	6,242		

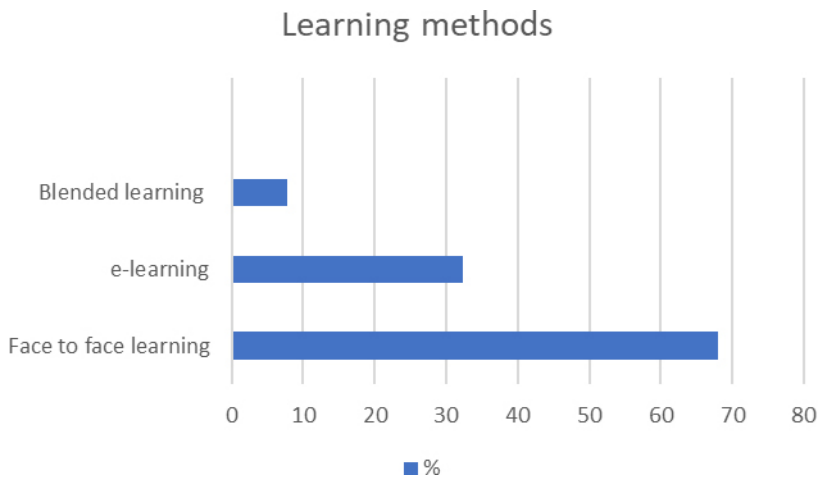
Identification of needs and challenges related to police training and education

The Graphic 7 shows some *training needs* identified and shared by the police officers sample considering the different working departments and types of crimes investigated. Subjects as information analysis and processing, international cooperation, computer crimes, and police techniques are the essential topics identified by the sample to improve police officers' competencies.

Graphic 7. Police officers identification of needs and challenges related to police training and education

Regarding the *learning methods* (Graphic 8) that the police officers identify as more adequate for the police training and education, it has been identified the *face-to-face training method* as the most important for the acquisition and training of police competencies (69%). The e-learning training method is identified by 35% of the police officers' sample and is considered as more adequate for the conceptual and/or first level of police training.

Graphic 8. Police officers' identification of learning methods to police training and education



Conclusions

The participation in the CEPOL 2021 Conference represented for the Institute for Judiciary Police and Criminal Sciences a first step regarding the monitorization of the impact of COVID-19 pandemic on the Judiciary Police organization.

The main conclusions of this study are relevant as regards responses to the pandemic in police work. In this context, we underline the following issues:

- The most important impact refers to the required adjustment of working conditions. Police officers' operational activity was constraint due to lack of interaction with the community and citizens in general which affected information gathering activities like testimonies, searches, intelligence and surveillance;
- An also highly relevant impact consisted of the difficulties in human resources management due to the absence of sick workers and family support needs regarding COVID -19 pandemic and workers in quarantine. Due mainly to new internal scheduled timetables, many activities suffered a retardation effect on the work progress.
- The COVID-19 pandemic also affected the cooperation with different stakeholders like courts, prison system organisations and forensic medicine considering the mandatory lockdown.
- Police officers identified several changes in criminal patterns considering the different types of crime. There is the perception of increase in computer crimes in different areas as fraud, child pornography and trafficking; Regarding violent crimes as robbery,

homicide, and drug trafficking the police officers reported a decrease of this kind of criminal phenomena.

- Another perspective of the study concerns the police officers' psychological and mental wellbeing assessment in pandemic context, considering the burnout and stress indicators of the study sample. It was identified a low level of Compassion Fatigue which represents low/ moderate level of burnout and a low level of secondary traumatic stress. Regarding the analysis of the level of pleasure-driven from being able to do the work well, a positive indicator of professional adaption, the police officers' sample presents a moderate level of compassion satisfaction. No statistically significant differences were identified between men and women regarding the incidence of compassion fatigue and compassion satisfaction.
- Moderate level of burnout in some groups of police officers working in specific criminality was identified: the professionals working with crimes against the state, computer crimes, money laundering, corruption, economic and financial crimes present a moderate level of burnout. The other police officers' groups present a low level of burnout indicators.
- Concerning the police officer's identification of needs and challenges related to police training and education in Covid-19 pandemic the research results present subjects as information analysis and processing, international cooperation, computer crimes, and police techniques as the essential topics identified by the police officers' sample. The police officers' perception about the training methods more adequate for the police training and education in the Covid-19 pandemic situation is the use of face-to-face learning methods. The use of e-learning training methods is identified as more adequate for the conceptual and first level of police training.

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Community Policing in Malta During COVID-19

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Abstract

Community Policing (CP) was introduced as a pilot project in one of the coastal localities in the north of the island in July 2019, with a view of expanding it to other localities by end 2020. The onset of COVID-19 in March 2020, with its subsequent lockdowns and prohibitions, threatened the future of this project in more ways than one, at least on paper. However, in practice, the initiative continued to thrive, to the point where Community Policing was introduced in another 11 localities around Malta by September 2020 with a view of expanding it to another 9 localities. This paper looks at what could have made this initiative successful in spite of all the odds affecting both community and policing. The research involved 90 hours of fieldwork covering street patrol observation and unstructured interviews with the Community Police leaders and most of the officers in 12 localities over three months. This paper evaluates the main issues shaping the project on paper and in actual practice, and how the two fundamental principles behind it – community building and proactive problem solving – survived the pandemic and also managed to overcome clashes encountered with the traditional police culture of the command and control approach at the district level.

Keywords: *Community Policing, Malta Police, COVID policing*

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Background

Community Policing (CP) was first introduced in Malta in July 2019, as a result of a public commitment outlined in the Malta Police Transformation Strategy 2020-2025. The brief promised "to provide a professional and trusted policing service to ensure safety and security in partnership with the community." The intended objectives were threefold: "increased trust" in the police service, transforming the service into one that was a "flexible, efficient, and community-centric" service whilst fostering "effective and efficient leadership and management" styles.

It started initially as a pilot project in Mellieħa, a small town of 11,823 residents on the north coast of the island, with the intention of expanding it to another 11 localities a year later. However, COVID struck eight months into the project and Malta went into the first national lockdown in March 2020. This paper intends to outline the challenges faced by the project and trace its baptism of fire. The reasons behind the decision to start from Mellieħa, to then expand to selected localities, the reason for community policing starting in 2019 will be discussed in a separate paper.

The concept of 'community'

Before this project, the term 'community relations' was used sparingly and often misused as a synonym for public relations. In November 1997, because of an internal police reform that started in June 1996 and lasted for about 24 months, a new unit was set up with the intention of enhancing relations with the public. It was called the Community and Media Relations Unit, (CMRU)[3], and which catered for two main activities: a contact point for the media with regards to police and crime news, and community promotion, largely through educational campaigns and especially school visits[4]. The Unit was also serving as crime prevention programme dissemination point and at the time was the driving force behind promotion of community strategies such as Neighbourhood Watches.

Towards 2015, an attempt was made to introduce 'Tourism Policing'. Again, the emphasis was on Mellieħa, but this time round the focus was mainly on beach patrols, where there was such a touristic feature, and patrol in the historical areas such as Valletta and Mdina that was aimed at improving the image of Malta as a tourist destination. The participants were even trained at an institute specialising in the tourism industry. However, the effort only lasted for approximately two consecutive summers. With the benefit of hindsight,

3 One of the authors, Dr Mary Muscat, used to be a police inspector and the first manager of this unit.

4 CMRU staff received training at the Grampian Police at Aberdeen College of Education in Scotland. This included a month of lectures and undergoing supervised assessments by making presentations in different schools.

the effort looked more like an ephemeral political decision that was followed blindly without any substantial internal or external review, making it look more like an experiment rather than a model of policing.

The spread of COVID-19 could easily have spelt the end of the Community Policing project, with officers recalled and re-assigned to enforcing the new pandemic regulations and assisting frontliners in other aspects of such enforcement. On 13th March 2020 schools, childcare centres and University were closed, together with non-essential services. This partial lockdown went on until June 2020, with educational institutions remaining closed while services were slow to re-open with restrictions.

The Community Policing timeline was therefore disrupted eight months into the pilot project, only to resume fully by July 2020. The pilot project in Mellieħa was confirmed upon review and firmly established; in September 2020 the exercise was simultaneously extended to another 11 localities around the island. This meant that a total of 12 localities were operating according to the established Community Policing standard orders and did this for six months in total until March 2021, when a second lockdown was called for schools, childcare centres and non-essential services. And yet Community Policing not only continued to promote its aims and objectives, but it forged a tangible presence among the public and it continued to expand in spite of the COVID-19 pandemic obstacles.

This paper outlines each of the twelve Community Policing team experiences below. The research will be continuing beyond this initial stage in these localities as well as the projected introduction of more Community Policing teams. In fact, in the meantime, Government in May 2021 revealed plans that Community Policing was to be introduced in another nine new localities by the end of that same year and that it would be nationwide by the end of 2023 (Delia, 2021)[5]. Considering that there are 54 localities in Malta, to have 21 localities practicing CP means that close to 40% of the island would have seen the introduction of this model of policing over a period of two calendar years. Internally, the move from having one inspector to supervise all 12 teams to two inspectors who will manage the north and the south regions respectively was planned to reflect this expansion.

Methodology

The methodology used to conduct the 90-hour research into Community Policing in Malta during Covid-19 was designed to match the area of research. The methods applied

5 The new localities indicated are St Julian's, Vittoriosa, Senglea, Cospicua, Kalkara, Ħamrun, Marsa, St Venera and Tarxien, that are found in Malta. Localities in the sister island of Gozo are not yet included in this next expansion.

and developed to this study helped to gain as much insight as possible about the subject (Kothari, 2014), as both researchers were in the pursuit of knowlegde to obtain valid and reliable information from all the participants through their everyday lived experiences (Van Manen, 2016).

Data gathering employed was through interviews and observation through field and on the job shadowing. Observation involved much more than just being present and observing officers conduct their daily routine, it required being disciplined, knowledgeable, creative and hard working as much as the patrol officers are. Observing the officers' interaction with citizens enabled the practical understanding of the difficulties they experience everyday as how and what was said is a major source of qualitative data (Patton, 2002).

Intial contact with higher ranking police officers consisted of formal meetings to set up clear guidelines and paramaters for research to occur, as well as interviews to be able to get a clear overview of the set-up of Community Policing in Malta. Interviews with the police officers were informal and conducted on the job whilst patrolling the respective areas for long hours at a stretch, sometimes spanning the whole duration of a 12-hour shift. The main advantage of interviewing in this manner was that non-verbal reactions could be obversed during the course of the day, any issues or questions that arose could be tackled through follow up questioning, and clarification could be achieved if either party did not understand a question or response. It was important to be able to build a rapport during the hours of patrol as the quality of the interaction between the interviewer and respondent determines the calibre of the data collected (Bailey, 1994).

Research was also gained through the social networking media pages of the respective 12 localities where Community Policing was in force. These pages provide a virtual space where citizens of the localities can lodge complaints, seek help and acknowledge the work of the Community Policing teams, as well as offering a platform for the Polcing teams to notify citizens of upcoming events within the community, traffic closure and information regarding the locality. Viewing the interaction between officers and citizens helped to gain an understanding as to the nature and dynamic of the relationship that evolved between the two.

Notes were jotted down immediately after every interview and observation, taking into consideration facial expressions and body language. These qualitative methods were employed to gain understanding, find out and learn about the social world of the Police Force during the pandemic and what their lived experiences are, the challenges they face and the recognition they receive through itneracting with citizens on a daily basis. Community policing is much more than placing police officers on the beat, it is a guiding philosophy helping to facilitate police and community collaboration.

Interviews, together with foot patrols, were conducted between October and December 2020 and arrangements could be made once the first COVID lockdown was lifted[6]. The interviews conducted were unstructured and centred round the perception of the Community Policing team on traditional police culture vis-à-vis this new model of policing, the officers' own fear and safety in patrolling, and their training needs. These issues will be dealt with in future publications whereas this paper is dealing with the impact of COVID on Community Policing[7].

The local impact of COVID-19

People often overlook the fact that community policing encompasses more than just foot patrols, bike patrols, and neighbourhood beats. These are only tools for the trade; for community policing to be successful, it has to become a mind-set of law enforcement that pervades the whole organisation. This idea is founded on the law enforcement agency's view of itself as a customer-service-oriented organisation. It is a top-down approach that is entrenched in the organisation. Community policing effectively focuses on more than simply the typical reactive parts of law, it also makes an effort to be proactive in dealing with problems and issues that arise within the communities they police. In Malta, the community policing model was based on that of the College of Policing UK[8]. During the pandemic, citizen compliance to the COVID-19 public health regulations was attended to by the traditional policing methods. In fact, community policing in Malta did not serve as an extension of law enforcement tactics to enforce such regulations, but rather worked hand in hand with healthcare to reinstate confidence in public order where and when needed. This was quite an exception to the general rule elsewhere in Europe (Fatsis & Lamb, 2022).

Mellieħa

Mellieħa is a touristic town with a population of 11,823 inhabitants (Regional Statistics Malta 2019 Edition) and a landscape that is urban, rural and coastal. Its spatial extent makes it one of the larger localities to patrol and the choice of this locality as the pilot project made sense in this regard. Demographically, its residents are both local Maltese-speakers, British ex-pats and since 2004, the number of EU residents have steadily increased. Irrespective of COVID-19, the main issue that CPOs faced was the language barrier of residents who did not speak or understand the English language.

6 Incidentally, the first COVID vaccine was administered just before Christmas of 2020 and members of the police were vaccinated in April and May 2021.

7 The authors wish to thank the following Community Policing personnel: Inspector Mark Cremona, Inspector Gaby Gatt, Sergeant Michael Zahra and Sergeant Daniel Garcia for providing the pamphlet designs and artwork, all Community Policing team leaders, all the CPOs and the Commissioner of Police.

8 Personal communication with Insp. Gatt.

Before the pandemic, this locality was the only one that did school appearances and teachings to the students, visited old people's homes within the locality to create awareness about security, as well as worked closely with the Local Council to bring about change in the locality through the physical dimension. But because of the first national lockdown that took place between 13th March and 2nd June 2020, schools were closed, and residents were asked to stay indoors to avoid infection spread. It seems that the typical issues in public order that would occur pre-pandemic were displaced indoors, as there was an increase in the number of domestic incidents, most notably involving non-locals. CPOs handling these issues were faced largely with linguistic and cultural barriers.

Swieqi and Pembroke

These two localities are home to approximately 18,000 inhabitants and are both within walking distance of the entertainment and nightlife district in Malta. The population cohort in these two localities consists of relatively young families. Pembroke is host to unique historic buildings dating back to the Knights of the Order of St John, two watchtowers guarding the coast, and British military buildings and training grounds that are still used by the local armed forces. Pembroke hosts a remarkable high concentration of state schools, private educational institutions, foreign university campuses, as well as schools teaching English as a foreign language, in total an amount of 13 educational institutions. The student population is quite high and averages out throughout the year with foreign students visiting in Easter and in the summer months for English language courses. This particular population has been a priority for CPOs due to its vulnerability being mostly under 18 years of age. Apart from that, the local residents are a mixture of Maltese, EU and third country nationals on the same scale as Mellieħa.

Swieqi has affluent up-market areas whose inhabitants, due to their socio-economic status within society, developed a sense of entitlement and this could be discerned through fieldwork observation as well in the way that such residents spoke to the police. CPOs stationed in this locality have experienced a high-level of expectation exerted by the residents in their response time to incidents. It has transpired, from observation, that there is a sense of urgency by the Maltese residents in particular who require such immediacy to avoid the escalation of incidents, as had been their previous experience when the neighbourhood was not as policed as it is currently. This is more of an anthropological observation that is quite unique to the area. Before the introduction of Community Policing, this neighbourhood was targeted in particular by a gang of East European thieves who would travel to Malta via catamaran from Sicily to carry out their criminal activities over the day and then immediately leave the island, as had transpired from police investigations and court arraignments. This spate of thefts had terrified the residents who would often report incidents of finding their houses marked by odd symbols, which later transpired were signs left by the gang marking the properties that had to be broken into. This organised crime activity tarred the local residents' trust in institutions that were

seen as slow to react, hence their sense of urgency and their entitlement to protection. Not only that, but being close to the entertainment area of Paceville and St Julian's, with the spill-over effect of the fear of crime due to such proximity with all the nuisance it would produce, increased the residents' expectations from Community Policing. Swieqi/Pembroke localities are known to attract teens and young adults during particular events such as Carnival and Halloween's trick and treating, that would result in drunken disturbances and breaches of public peace that were quite notoriously anticipated by all parties concerned. COVID-19 facilitated integration of officers into the community since residents were confined indoors and their fear of crime was quelled since the sources of disturbances were also kept at bay. CPOs took advantage of this time to get to know the citizens, build a relationship and good working rapport.

Valletta and Floriana

Valletta being the Capital City, a UNESCO World Heritage site and having a waterfront that caters for cruise liners, attracts millions of tourists every year. The upper part of this city is touristic and commercial with the main street running down the length of the capital lined with coffee shops, restaurants and retail outlets. Valletta also houses main Governmental Ministries and departments, that coupled with tourists visiting sites and museums generate heavy pedestrian traffic. Abounding with historical Baroque architecture, museums, monuments, palaces, bastions, forts, squares and churches, it is a cultural hub that has both its positive and negative aspects for policing: the negative side being that vandalism becomes a heritage crime and that tourists who break the law can easily depart not be caught in time and prosecuted. Whole campaigns about pickpocketing are an on-going issue as residents and tourists alike fall victim to this organised crime. Due to the COVID-19 pandemic, mass cultural events such as Notte Bianca, concerts, cruise liner visitations and other cultural events could not be held, and so the CPOs could concentrate on the more mundane daily policing issues.

In direct contrast to the upper part of the City, the lower part is home to an ageing population and low-income/less than average educated residents living in two extreme conditions: affluent areas and low socio-economic areas with social issues ranging from drug abuse/trafficking, domestic violence, prostitution, intergenerational issues and homelessness. There are affluent non-Maltese residents living in Valletta, however they are few and spaced far between. In any case, not all of the population in the lower part of Valletta are locals, as in locally born and bred in Valletta, as the gentrification of the City meant that the younger generation has mostly moved out to other localities, depleting the attachment to the place.

COVID-19 exacerbated and highlighted some of the social issues experienced: domestic violence victims confined inside with their aggressors, drug trafficking and financial problems of the gambling addicts, plus squatting in empty dwellings due to homeless-

ness. CPOs were spared the usual pressures of policing tourist and cultural activities, from minor issues such as parking and watching out for pickpocketing. In this respect, they had the chance to focus much more on these residential issues. There was an issue with having a physical place from where they could operate since the district police station was already crowded, but this meant that CPOs spent a considerable amount of time patrolling on foot, by e-bike or by car.

The same can be said of Floriana, a town just outside the Valletta bastions, having a number of leading government ministries and departments located there: the Health Centre that had a catchment area covering quite a large area, a hospital specialising in oncology, as well as Caritas Malta's drug rehabilitation centre, Police Headquarters and the main Curia of the Archdiocese of Malta. This town has an ageing population and is dotted with dilapidated buildings offering opportunities for squatters to reside in. Community policing takes on a different nature here, with officers dealing with mundane issues arising from residential disputes and drug related concerns since users get their clean syringe supplies from the Health Centre and tend to be a nuisance around the town due to their erratic behaviour and crimes of opportunity, often causing fear of crime among the residents. At one point, a fugitive of a homicide that made it on national news found refuge in an abandoned basement near the Health Centre and had to be taken out after shots were fired by the police, which further increased the residents' fear of crime. COVID-19 helped curb drug users' activities and in easing the residents' cause of alarm. The refurbishment of the Floriana police hub was in progress during this research's fieldwork and in a sense, it helped the CPOs to be more present outdoors in the streets, which gave them a more visible profile as happened in Valletta.

Mdina, Rabat, Mtarfa and Dingli

These four localities in the northern region of the island are rich in history with places of interest ranging from the historical Capital City of Mdina, Christian catacombs of the first and second century AD, medieval palaces, the cathedral and churches, Roman villa ruins and museum, bastions, Baroque characteristics, the British clock tower and naval hospital and Dingli's scenic cliffs. These localities are geographically adjacent to each other and cover a large area of farmland and built environment making up a total area of 33.9 km^2.

Issues encountered by CPOs were two and related to the internal police culture. The first was a clash with the district police that came about as CPOs were viewed as doing 'soft policing' - a marketing or public relations exercise, as their approach towards community issues was proactive and did not deal necessarily with offenders. This was one of the localities where the clash between policing styles became evident from the introduction of Community Policing and the pandemic aided to make this distinction even more evident; still, it was not the only locality where this became evident during fieldwork.

The second police culture related issue emanated from the mistaken belief that CPOs were taking away valuable resources that were needed by the district police. It seemed that the main issue was the distinction created by the CPOs' different uniform, use of Segways and access to a mobile phone for work purposes which the district police did not have access to.

An issue that became evident during fieldwork was also cultural but it pertained to the local anthropological make-up of this locality: how local males patronized female community policing officers. Upon further investigation and interviewing, the officers pointed out that some local residents still view women in a traditional manner meaning that certain jobs considered as 'dangerous' should not be performed by women in society. Perhaps the issue was exacerbated during COVID-19 as most of those breaching the lockdown rules were middle-aged and older males who would venture out and meet without respecting the regulations, or even try and gather around outlets selling take-away food. However, there was an incident where a community-policing officer saved the life of a 2-year-old toddler who was choking inside her residence. Whilst on foot patrol the officer in question heard a commotion coming from inside a house, he knocked on the front door and through prompt first aid response saved the child from chocking to death (Times of Malta, 2020). This incident made the headline news, garnered respect and had a very positive effect on the residents towards community policing officers and the concept of Community Policing.

Marsaxlokk and Birżebbuġia

Marsaxlokk is a traditional fishing village that attracts foreign tourists and locals for the restaurants specialising in fish cuisine with the seafront lined with around 50 restaurants, bars and coffee shops as well as shops and hawkers selling fresh fish. The Sunday market is a main tourist attraction, as is swimming in the summer months. This resident population itself is inclined towards an older generation made up of the original fishermen and their families who would have sustained with the fishing industry. On the other hand, the neighbouring town of Birżebbuġia is popular for its sandy beach, archaeological sites, and the Malta Freeport Terminal, which is one of the busiest trans-shipment hub ports in Europe.

In these localities CPOs encounter diverse issues stemming from the same type of clash between police cultures as was encountered in Rabat and Mdina. In this case, it seemed that the zero tolerance policing of the CPOs contrasted with the district police with regards to parking issues, littering and encroachment of restaurant tables beyond the permitted limits. CPOs were initially viewed as an obstacle and an impediment until a balance was found. For example, issues with fishermen blocking walkways to pedestrians because of boat and net maintenance as well as the problem of derelict fishing vessels, were tackled over time, and in some cases through the mediation of the local council. Some locals were truly apprehensive of this style of policing at its inception, deeming it suspicious and imposing, but due to continued support from the Local Council, CP

eventually thrived and consolidated itself. Covid-19 helped in forging this with the residents, however the coastal promenade area where the offending took place was still proving difficult to police due to the intensive landuse. In fact, at one point, an altercation between a CPO and a fisherman occurred over a misinterpretation of regulations and ended up in court. As in Valletta, the Marsaxlokk CPOs were operating from premises within the precinct of the primary school that was lent to them temporarily as they did not have their own space at the time. The policing hub on the waterfront was still under construction at the time the fieldwork was conducted.

Fgura

Fgura, once a rural farming village, experienced rapid development after World War II due to the taking up of residences by British officers working at the Malta Dockyards, which also provided employment to many locals, making this town relatively modern. The main street, which crosses the length of the town, is the primary commercial area. Since property is cheaper in this part of Malta, many non-Maltese residents settle here, especially third country nationals. This has been indicated by locals and CPOs alike as causing ethnic clashes, whether verbal, physical or giving rise to segregation of activities to certain areas as was happening in the neighbouring locality of Paola largely due to the increasing Muslim population. Issues encountered by the Community Policing team were mainly due to cultural misunderstandings and fear of crime credited to different communities sharing the same zones.

Another major issue is due to the fact that this locality is densely populated, creating a shortage of parking spaces and ensuing clashes between neighbours. This locality is also home to the Home Affairs Minister under whose patronage the Police Force lies, an issue which created performance anxiety on the CPOs. Incidentally, Fgura is also home to the headquarters of the Law Enforcement Agency (LESA) that enforces traffic and littering bye-laws, and whose officers are called Community Officers (COs). There is no particular confusion between the two enforcement roles, after all the residents can easily distinguish the two from their uniforms, logos, and knowledge of the service given. This means that the local population was already used to being patrolled by LESA officers, in fact, the introduction of Community Policing in this locality had the most smooth transition of all according to the fieldwork observation. But Community Policing helped with allaying public fear of crime since the local police station could not be manned daily and COVID-19 further emphasised the police presence, giving the CPOs high visibility.

Other observations

The impact of COVID-19 has tried and tested the Community Policing structure as well as the internal organisational support in continuing with the project and establishing the

foothold on a more permanent basis. During this trying time, this goodwill was crucial to the success of Community Policing. In fact, in April 2021, the public trust survey showed an increase in 4%, which translated as 18,000 more positive responses[9]. The survey responses were collected and analysed between March and April 2021, which means 6 to 7 months after the introduction of Community Policing in the new localities.

Internally, the community policing effort continued not only in terms of the day-to-day running but involved more future planning in expanding the exercise geographically and in plans for engaging and recruiting more staff. Training was provided even during COVID-19 in topics such as community building, proactive problem solving and positive/innovative measures of policing.

It seems that the failures of neighbourhood watches and tourism policing were studied by the internal police administration although the central core needs to focus more on tangible crime prevention measures that empower the public. The second way forward, according to this research, is to work on the internal clashing cultures between the traditional district policing and community policing. Just like justice, community policing 'must be seen to be done' and the central administration must reinforce this new emerging police culture while reducing friction with the traditional command and control at the district level. Since community policing is not a one type fits all style of policing, each Maltese locality deals with issues encountered differently and directly according to need always keeping in mind to build community trust and ensure public safety (Bayerl et al., 2017).

Conclusion

Despite being implemented during a pandemic, with issues affecting community and policing globally, the Community Policing initiative proved overall successful in bringing the two essential principles of community policing together – community building and proactive problem solving. These fundamentals transcend reassurance through visible and effective police patrolling in the respective localities in partnership with Local Councils to effectively enforce, assist, educate, respond rapidly to circumstances, target hot spot areas, prevent violence and other criminal activity. Not only that, but in spite of COVID-19, community policing in Malta was buffered from the new policing commitments. It was not involved in any of the inspections or extra policing duties brought about due to the pandemic, which was crucial in allowing the new system to develop and form its own solid foundation. In fact, COVID could have thwarted the community policing efforts and misguided the public by diluting the true intent behind the project, but buffering Com-

9 See Eurobarometer (2021) and also a related social media posting of Malta's police https://www.facebook.com/themaltapoliceforce/photos/a.489182811165282/4108049729278554/?type=3 (last accessed 5th May 2021).

munity Policing ensured its development and integration into the existing structure. No other studies could be found to substantiate this research where community policing was introduced during the COVID-19 pandemic. This makes Malta all the more unique in its approach to introducing this type of policing concept successfully in the face of hardship.

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