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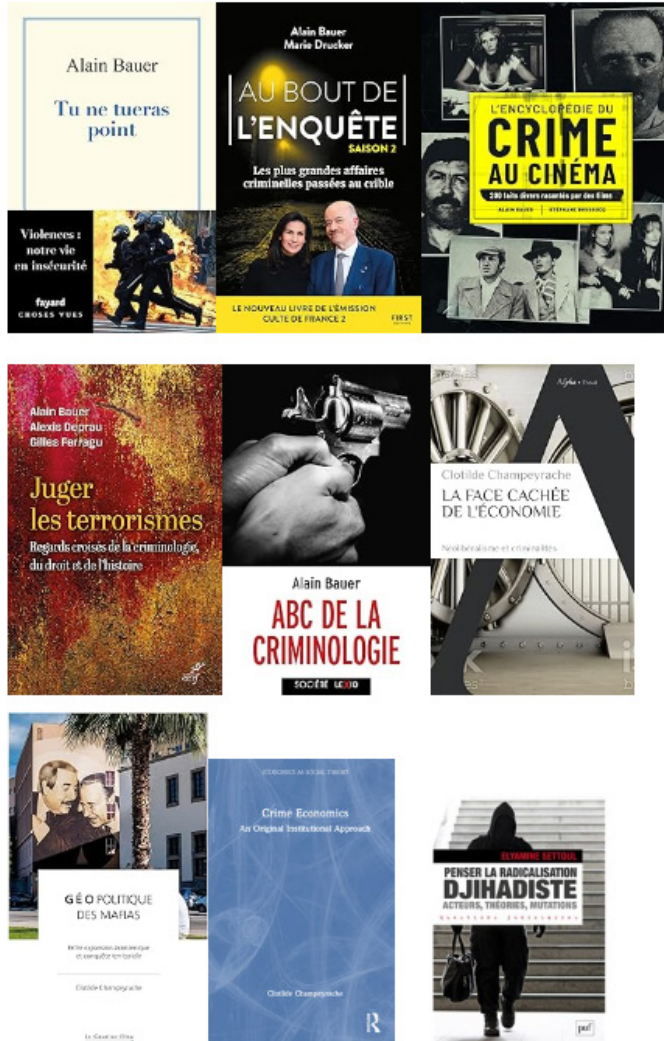
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Using Social Network Analysis to Combat Organized Crime

Didier Lebert

*Unité d'Economie Appliquée, ENSTA – Institut Polytechnique de Paris
i3-CRG Ecole Polytechnique – CNRS (UMR 9217)*

Introduction

In 2001, Nigel Coles noted the limited use of Social Network Analysis (SNA) in the study of criminal networks (for a summary, see Wasserman and Faust, 1994, and, more recently, Borgatti et al., 2024). However, this approach is specifically designed to represent and characterize the links, contacts, and exchanges between actors within groups. It does so in the form of specific mathematical objects called “graphs,” which are made up of “nodes” (the members of the network) and “links” (the connections between them). Previously, research on the structure of criminal networks had focused on individual attributes and typologies (e.g., leaders vs. lieutenants) based on life stories, observations, or court documents. According to Coles, this resulted in a focus on “leaders,” which introduced a major bias: these studies underestimated the effective role of intermediaries in circulating information and resources. Conversely, SNA reveals that neutralizing a less visible but “central” actor can more effectively weaken or dismantle a criminal network than arresting a leader (Berlusconi, 2016).

Since the publication of this initial article, literature using SNA to study criminal networks has grown and diversified. The areas of investigation now include Italian mafias (e.g., *Ndrangheta*: Calderoni, 2012, 2014; Berlusconi et al., 2016; Calderoni and Superchi, 2019; *Cosa Nostra*: Cavallaro et al., 2020), illicit crops (Dutch cannabis network, Duijn et al., 2014), cybercrime (Nigerian fraud, Sarvari et al., 2014), international drug flows (Giommoni et al., 2017, 2022), collaboration between criminal organizations (Coutinho et al., 2020), and complementarities between legal and illicit trade (van Uhm et al., 2021).

SNA offers a variety of indicators to characterize networks, their members (“nodes”), and their relationships. These indicators include measures of “centrality” (the relative importance of each member or relationship; Tsai et al., 2019); detection of “communities” (groups of densely connected members within the network; Calderoni et al., 2017); and metrics of information fluidity or substitutability between actors (Cavallaro et al., 2020). These tools are used to empirically test dismantling strategies, such as the targeted elimination of central nodes, the isolation of logistics members, and the simulation of disruptions on critical links (Calderoni, 2012; Ficara et al., 2023).

In line with this, this article uses SNA to evaluate the vulnerability of criminal networks based on two key operational issues: detecting and eliminating influential members and identifying missing links in police investigations.

This article will outline the main formalisms of SNA, limiting the use of mathematical language. Our analysis is based on the dataset provided by Cavallaro et al. (2020). This dataset was compiled from “Operation Montagna,” which was conducted in Sicily until 2007. It is comprised of provisional detention orders, telephone wiretap transcripts, and surveillance reports. Our study proposes new formalisms and empirical results that differ from those of Cavallaro et al. Each operational issue is addressed in a dedicated section that links methodology, analysis, and implications for action.

1. Identifying leaders

Centrality is a key concept in SNA because it is used to identify the nodes that structure a network. The most illustrative example is that of a star: a node at the center is directly connected to all the others, while the latter are not directly connected to each other. Freeman (1979) demonstrates that the multi-connected node stands out in three ways in such a configuration. First, it has the largest number of direct links, i.e., the highest “degree.” Second, it can reach any other node in the fewest possible steps. Its average distance from the other nodes is therefore small, a property called the node’s “closeness.” Third, it is found on all routes connecting the other nodes. Thus, it plays a necessary link role, measured by its “betweenness.” In an ideal star, these three measures of centrality culminate at the same node.

To quantify these properties, Freeman (1979) suggests using the shortest elementary paths, also known as “geodesics,” that connect them. An elementary path is a sequence of links that does not cross the same intermediate node twice. Only the paths that use the fewest intermediaries are retained between two nodes. For example, if we want to connect A to D and there are two paths, A-B-D and A-B-C-D, both of which are elementary paths, only the first path is considered, as if the second path did not exist. This convention, now standard practice, assumes that network actors always favor the shortest path. This remains a strong assumption.

Other, less restrictive measures assign a decreasing weight to all paths, whether geodesic or not. The “prestige” index proposed by Katz (1953) works as follows: Each route contributes to a node’s centrality, but its influence decreases with distance, so a direct path counts more than a path with detours. Using both Freeman’s indicators and Katz’s index, the rest of this section will demonstrate how these approaches complement each other, shedding light on the flow of information in networks where communication channels may be more or less direct.

The indicators proposed by Freeman (1979) were originally designed for a very specific scenario: a network with no direction or weighting. In other words, the links connecting two nodes have no intensity. They simply indicate that a relationship exists without indicating its strength. An undirected link can signify a common affiliation, a meeting, or a friendship, for example. A directed link, on the other hand, indicates a prior relationship, a relationship of authority, or more generally, a flow from a source to a target. Similarly, an unweighted link simply attests to the existence of a relationship, while a weighted link specifies the frequency or intensity of this relationship: People may meet more or less often or exchange varying volumes of goods. By combining these two dimensions—direction and weighting—four *simple* network configurations are obtained. They are *simple* because there are many other properties of nodes and links that complicate this typology. For instance, we must study “multilayer” networks, in which several networks reporting links of different types overlap. Within certain limits, it is possible to add these layers to create larger networks. The properties of these extended networks depend on those of their layers.

The remainder of this paper will focus on undirected networks, whether weighted or not, as well as multilayer networks. Therefore, we will set aside questions of flows, prior relationship, and formal authority (as seen in an organizational chart). Our assumption is that the analysis of an undirected network can reveal positions of “real” authority even without this information. Whether we should disregard initiative relationships (e.g., who proposed a meeting or who receives on their turf) is more debatable. Although the raw data would enable us to create a directed graph, the current literature still neglects this enhancement. Existing cleaned databases reflect this omission. We will use one of these cleaned databases below. However, we will fully exploit the intensity of the links because these same databases provide the necessary information (e.g., the number of meetings).

The temptation to represent the same network in parallel in both weighted and unweighted forms dates back to Zachary’s seminal work (1977). While studying a karate club, Zachary applied community detection algorithms to several versions of graphs representing this social network. This allowed him to verify the robustness of his conclusions: the actual disintegration of the network occurs at the fringes of the communities, as suggested by theory. The present study employs the same approach: Do we obtain similar results when deliberately simplifying the description of a complex network? In contexts where direction, weighting, and layers are taken into account—for example, in an international trade network—the use of a simplified representation is sometimes required for computational feasibility (Fagiolo, 2010). It may be surprising to note that the social sciences do not hesitate to use graphs in all their complexity. We will return to this point at the end of the article. In contrast, the “hard” sciences, such as statistical physics and epidemiology, often prefer—for reasons of scale—simplified models that perpetuate many of

the metrics inherited from classical SNA (see Watts, 2004, for a brief description of the uses of SNA metrics in the “new science of networks,” as well as recent works by Barabasi and Posfai, 2016; Latora et al., 2017; Dorogovtsev and Mendes, 2022). The measures developed by Freeman (1979) and Katz (1953) can be adapted to weighted and multilayer structures. Therefore, they can serve as common sources for all the structures that interest us.

The data relating to Operation Montagna, made available by Cavallaro et al. (2020) on GitHub,¹ is presented in two *.csv* files. Each file describes a layer of relationships and has the same structure. Three columns record the ID of the first node, the ID of the second node, and the intensity of their interaction. Each row corresponds to a single observation. The first layer lists meetings and the second lists phone calls. For brevity, we refer to the “meetings” layer as “m,” the “phone calls” layer as “p,” and the combination between these two layers as “c.” The identifiers of the members in the Sicilian Mafia network are numerical. Anonymization excludes all personal information. As mentioned earlier, the notion of initiative is not retained. A call from A to B followed by a call from B to A forms a single observation with an intensity of 2. From these files, it is possible to construct the corresponding graphs (Figure 1). In the visualization, the thickness of a link reflects the intensity of the interaction. To enhance understanding, two additional pieces of information are superimposed: node centrality, represented by symbol size, and community membership, indicated by color.²

The first two tables summarize descriptive indicators related to the graphs in Figure 1 and their aggregation. Table 1 shows that the phone calls network (“p”), the meetings network (“m”), and the combination of the two (“c”) comprise 100, 101, and 154 nodes, respectively. Their “density”—the proportion of observed links relative to the maximum possible links—is low, ranging from 2.5% to 5%. In the “p” network, more than half of the members communicate with only one other member. In most cases, the intensity of these exchanges (the “strength,” a weighted equivalent of the degree) does not exceed two. Calls therefore appear to be targeted and sporadic. In contrast, one actor stands out clearly as the most active: he maintains a direct link with nearly a quarter of the network’s members and participates in 71 conversations. The fact that the averages for degrees and strengths are much higher than the medians confirms the graphs’ highly heterogeneous nature. The “p” network is fragmented into five components, or subsets of nodes with no connections to other subsets. However, the “giant component”—the largest of these—comprises around nine out of ten nodes, with the remaining four components being very small. The “m” network has a similar profile but is around twice as dense. Members therefore seem to favor face-to-face exchanges, which are also concentrated around a few particularly active individuals.

1 <https://github.com/lcucav/criminal-nets/tree/master/disruption>

2 These interactive networks are available in *.html* format upon request to the author.

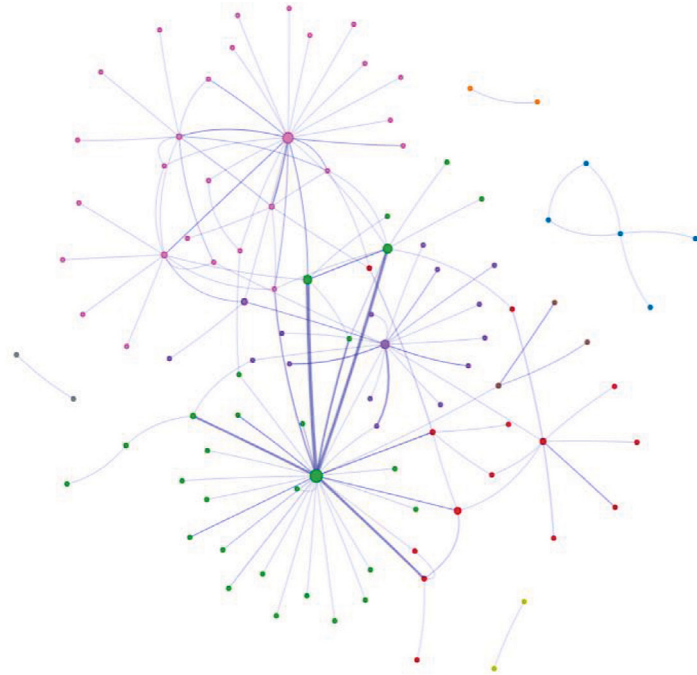


Fig. 1a. Phone calls network

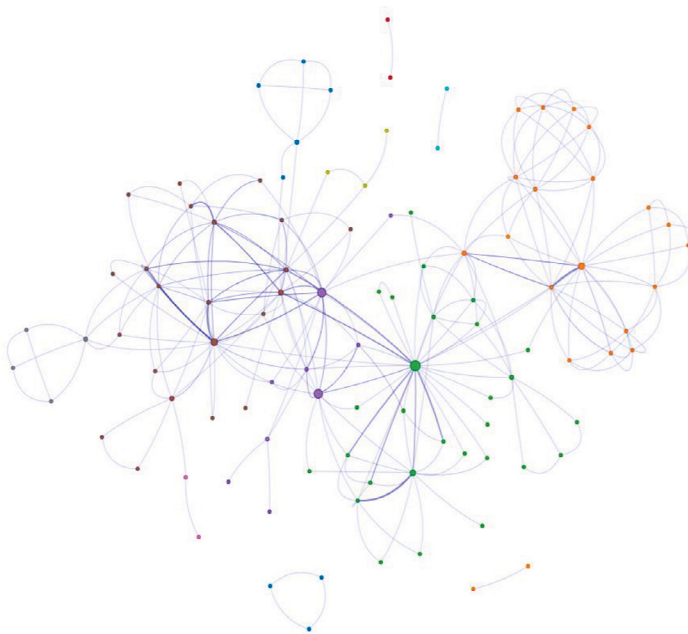


Fig. 1b. Meetings network

Figure 1. The structure of the “p” and “m” networks (relative node size according to betweenness centrality)

Table 1. Descriptive statistics on Montagna networks

Graph	# nodes	# links	# comp.	Density	Deg_mo	Deg_me	Deg_ma	Str_mo	Str_me	Str_ma
“p”	100	124	5	0,0251	2,4800	1	25	5,5200	2	71
“m”	101	256	5	0,0507	5,0693	3	24	9,0297	4	62
“c”	154	342	5	0,0290	4,4416	2	41	9,5065	3	116

Legend: # : number ; comp. : components ; Deg : degree ; Str : strength ; mo : mean ; me : median ; ma : max.

Table 2. Similarity statistics between “p” and “m” networks

Indices	Values	Descriptions
Jaccard_edges_unweighted	11.11	Jaccard index of shared links (presence)
Jaccard_edges_weighted	19.94	Jaccard index of common weight (intensity)
Node_overlap_Jaccard	30.51	% of players present in both networks
Spearman_strength_corr	0,3673	Correlation of strengths between networks
Spearman_strength_corr_p	0,0110	<i>p</i> value associated with the correlation
Edge_exclusive_m	0,8515	Fraction of links specific to “m”
Edge_exclusive_p	0,6935	Fraction of links specific to “p”

The “p” and “m” networks have nearly the same number of nodes, whereas the combined “c” network is considerably larger. Consequently, some individuals appear in only one layer. Table 2 provides several similarity measures that shed light on this partial overlap. Jaccard indices (ratio between intersection and union of networks), which are calculated based on the presence of links and their intensity (or strength), indicate that a significant proportion of members and connections remain specific to each layer. The two networks complement each other more than they overlap. Conversely, Spearman’s rank correlation, or order similarity, applied to node strengths reveals significant agreement (the *p*-value is less than 0.05). This indicates that the most connected actors in the “m” network are also among the most connected in the “p” network. In other words, despite their different compositions, the two networks have comparable top-level structures.

The content of Table 3 reinforces previous observations. It displays the centrality measures defined by Freeman (1979) in their original, unweighted form and their weighted adaptation, as presented by Wasserman and Faust (1994). For each network—phone calls, meetings, and the combination of the two—the five most central members, as determined by weighted betweenness, are listed.

Table 3. Top node centralities (ranked by weighted betweenness)

Tab. 3a. Centralities in the “m” network

Node	Degree	Strength	Close_unw	Close_w	Between_unw	Between_w
18	0,2400	37	0,4428	0,6747	0,3732	0,4907
29	0,1300	29	0,3962	0,6781	0,0898	0,4000
27	0,1600	44	0,4141	0,6683	0,1585	0,3972
47	0,1900	62	0,4161	0,6297	0,2198	0,2310
12	0,1600	35	0,3436	0,5628	0,1171	0,2023

Tab. 3b. Centralities in the “p” network

Node	Degree	Strength	Close_unw	Close_w	Between_unw	Between_w
18	0,2525	71	0,4053	0,8489	0,4182	0,4778
47	0,2121	54	0,3605	0,7829	0,2362	0,3632
29	0,0909	31	0,3816	0,8382	0,2195	0,2804
43	0,0505	15	0,3068	0,8034	0,0284	0,2327
61	0,1717	46	0,3853	0,7178	0,2817	0,2306

Tab. 3c. Centralities in the “c” network

Node	Degree	Strength	Close_unw	Close_w	Between_unw	Between_w
18	0,2680	108	0,4840	0,9185	0,4614	0,5507
29	0,1046	60	0,4132	0,9142	0,0731	0,3962
47	0,1895	116	0,4303	0,8855	0,2209	0,3882
43	0,0719	34	0,4107	0,8968	0,0380	0,3147
61	0,1242	50	0,4034	0,7307	0,1712	0,1642

Legend : unw : unweighted ; w : weighted ; Close : *closeness* ; Between : *betweenness*.

In all three graphs, node 18 is in the top position, monopolizing the largest number of “mandatory passages” in the flow of information. Its activity is especially notable in the “p” network. It is significantly less dominant in the “m” network, though it still occupies an important position. While Cavallaro et al. (2020) do not address this discrepancy, Calderoni and Superchi (2019) discuss it at length in their study of a Calabrian mafia network constructed using similar data. According to Calderoni and Superchi, the phone is a riskier channel than face-to-face contact. Using it reflects either organizational constraints (e.g., distance or logistics) or the urgency of a situation. Therefore, centrality in the phone calls network would not necessarily indicate a leading decision-making role. Some genuine leaders deliberately avoid this channel, preferring the discretion of face-to-face meetings. In their study, several of these leaders are completely absent from the “p” network.

However, the Sicilian case presents a peculiarity. Most of the central actors in “p” are also central in “m,” indicating redundancy in structuring roles between the two layers. The clearest exception is node 61. Almost invisible in the meetings network with only four links, node 61 occupies a prominent position in the phone calls network, propelling it to a key position in the merged network. This configuration precisely corresponds to the profile described by Calderoni and Superchi (2019) of a supervisor or logistician involved in day-to-day coordination rather than strategic decisions.

Centrality measures are used not only to identify positions and roles. They are also used to develop strategies for combating criminal networks.

Figure 2 shows how the giant component of Montagna networks shrinks as nodes are removed, one by one, in order of their centrality score. The goal is to simulate a police strategy that neutralizes the fewest actors possible while completely dismantling the criminal structure. The removal order follows Freeman’s three indices (1979) and Katz’s index. First, the most central member is arrested, followed by the next most central member, and so on until the network is exhausted.

Consistent with the findings of Cavallaro et al. (2020), eliminating approximately 15% of the most central nodes ensures that the largest residual component does not exceed a few units, regardless of the chosen index. However, not all indices are equal. Betweenness centrality is the most effective: at each iteration, the size of the giant component is smaller than with the other indices. Conversely, Katz’s index is the least effective, likely because it considers indirect paths and dilutes targeting. This relative inefficiency suggests that a measure too sensitive to the graph’s overall complexity can be counterproductive, causing information overload.

Disintegration occurs more quickly in the phone calls network (“p”) than in the meetings network (“m”), and the difference between the various targeting strategies is less pronounced. This difference shows that global properties, such as connection density, influence a network’s vulnerability to targeted node removal. A quick glance at Figure 1 suggests an explanation. “p” appears as a juxtaposition of stars, where the same nodes accumulate degree, closeness, and betweenness status. In contrast, “m” has more “gateway nodes” located at the junctions between communities.

These findings remain unchanged when working with weighted or unweighted versions of the graphs, which demonstrates the robustness of the results. Therefore, the betweenness indicator appears to be the most effective lever for designing a dismantling operation, requiring relatively few arrests.

As Cavallaro et al. (2020) acknowledge, this dismantling strategy is difficult to reconcile with reality due to the difficulty of understanding the true vulnerabili-

ty of such networks based on imperfect, incomplete, and static data. Other authors have developed techniques to estimate the complexity of the links between members of mafia organizations. These techniques help develop truly effective strategies for combating these organizations. This is the subject of the following section.

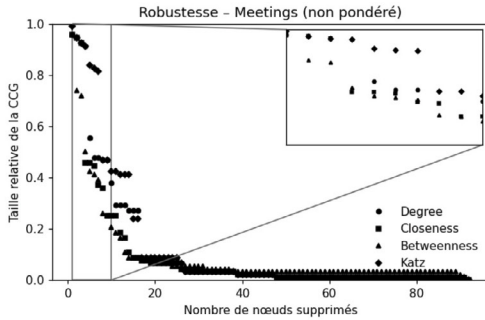


Fig. 2a. Robustness of the unweighted “m” network

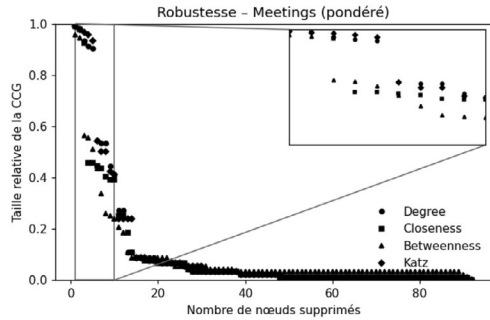


Fig. 2b. Robustness of the weighted “m” network

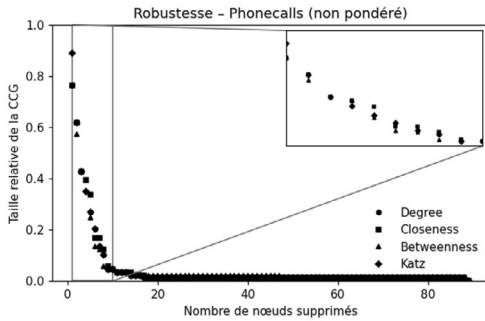


Fig. 2c. Robustness of the unweighted “p” network

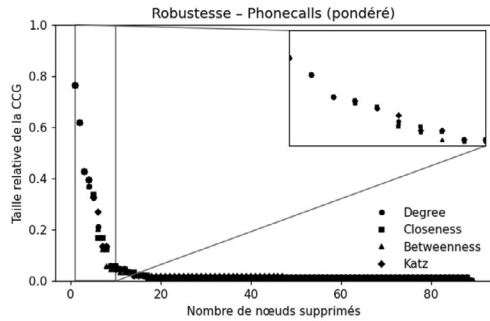


Fig. 2d. Robustness of the weighted “p” network

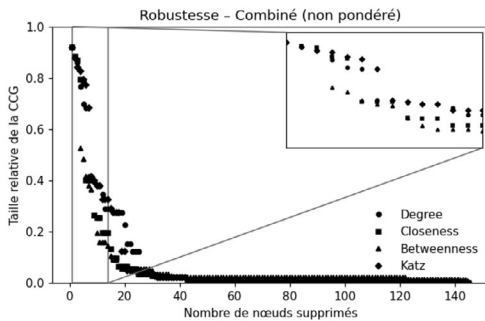


Fig. 2e. Robustness of the unweighted “c” network

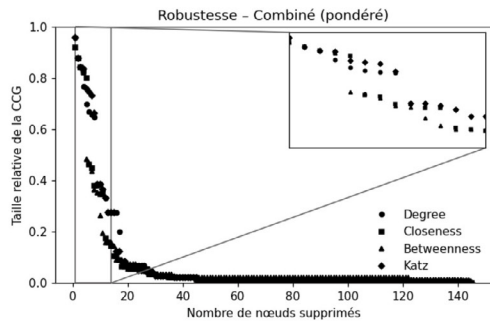


Fig. 2f. Robustness of the weighted “c” network

Figure 2. Robustness of the three networks in weighted and unweighted configurations

Reading. The x-axis represents an order of elimination of nodes (“iteration”) from the initial structures. The markers represent the projection on the y-axis of the relative size of the remaining giant component at a given iteration. The first 10% of iterations are zoomed in on, with the x-scale made logarithmic to make the results easier to read.

2. Detecting hidden relationships

Networks established on the basis of police investigations are incomplete by their very nature. Berlusconi et al. (2016) highlight the main reasons for this. The scope of an investigation is limited by a specific territory, time frame, and investigative resources. This necessarily leaves certain key players out of the picture, especially since many of them are very discreet. Additionally, the variety of communication channels and imperfect collection techniques mean that some exchanges go unnoticed. Therefore, the networks obtained lack both nodes and links.

Although it is impossible to retroactively expand the list of individuals under surveillance due to insufficient data, it is possible to refine the representation of relationships among those who have been identified. Berlusconi et al. (2016) explored this approach using data from Operation Oversize, which targeted approximately 50 *Ndrangheta* members involved in international cocaine trafficking, murder, and theft in the early 2000s. Similar to Cavallaro et al. (2020), the authors obtained a single undirected, unweighted network from telephone wiretaps.

However, they plan to use only a simplified version without weighting. This decision stems from the practical observation that, although there are prediction methods for adding missing links, none can reliably estimate their strength. Therefore, the centrality measures used to reassess the importance of members can only be calculated in their unweighted form. This argument is valid but not without limitations, as we will demonstrate below.

Berlusconi et al. (2016) propose using two sets of indicators to fill in the missing links. The first set is local, being based on the similarity of direct neighbors of nodes. When two unconnected nodes have many contacts in common, it becomes plausible that a direct link exists between them, even if the telephone wiretaps has not confirmed it. The second set uses more global information. Similar to Katz's prestige index, it considers longer chains of relationships but assigns them less weight as the distance increases. When compared with court documents, such as investigation files, the suggested links are, for the most part, consistent in both (local and global) cases. The authors conclude that the simplest method, local measures based on the existence of direct common contacts, is sufficient to produce reliable predictions.

Here, we propose reexamining the indicators used to predict missing links by incorporating connection strength information. Inspired by Newman's (2005) work on "random walks" in weighted graphs, this approach suggests that the stronger a link is, the more likely it is to be used when an actor "moves" randomly from one node to another (using the analogy of road width).

Following Berlusconi et al. (2016), we use a local metric based on rank-2 proximity—that is, the probability that two actors who are not directly connected,

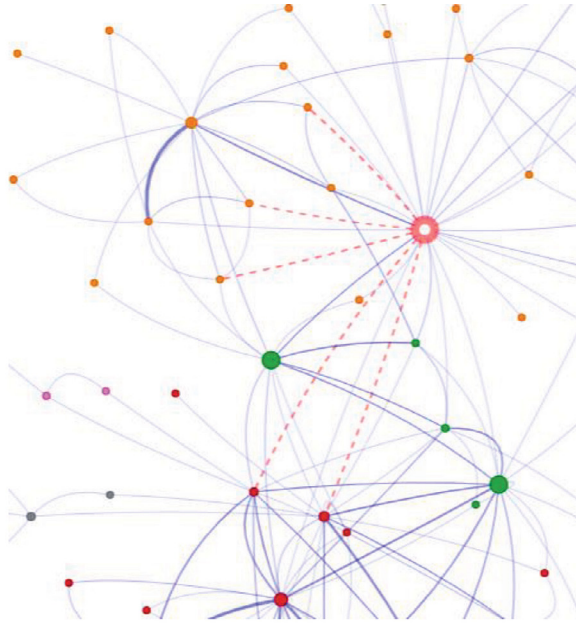


Fig. 3a. Hidden links in the “m” network for node 18 (zoom)

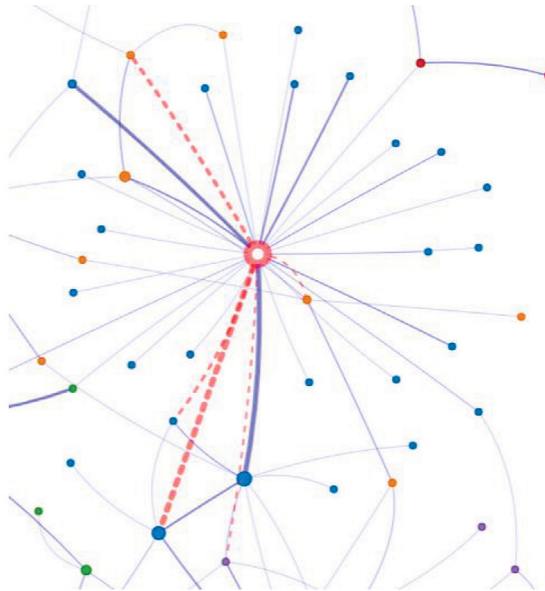


Fig. 3a. Hidden links in the “p” network for node 18 (zoom)

Figure 3. Evidence of hidden links in the “m” and “p” networks for node 18

Reading: The dashed links are the links revealed by the statistical procedure. Their thickness is an indicator of the value of the connection probabilities. The source node (member 18) appears with a white fill and a thick outline. It is the common point of all the missing links revealed.

but who have contacts in common, will form a link. The difference is that each link is weighted, so the probability of reaching a neighbor of a neighbor depends on the cumulative strength of the two segments traversed. For example, node A exchanges ten calls with B and only one with C, while B communicates ten times with D and C calls E only once. If A tries to reach an actor two steps away, the probability of reaching D is 10/11, compared to 1/11 for E. More generally, potential targets can be ranked in descending order of probability, regardless of the exact number of paths of length two connecting them to the source node.

Figure 3 illustrates the application of this procedure to the Montagna network. Node 18 is identified as the most central in terms of weighted betweenness in layers “m” and “p” and serves as the starting point. For each layer, the five most likely targets are selected. As with the unweighted method of Berlusconi et al. (2016), two topological effects are expected. First, communities become denser, and their mutual connections increase. Second, the average geodesic distance shortens, enabling faster information flow in the extended network.

This trend, which is driven by local procedures that add connections to densify and merge communities, as well as accelerate connections between nodes, echoes the network typology developed by Watts and Strogatz (1998). They demonstrated that various types of networks—social, technical, and biological—share two characteristics: a high clustering coefficient indicating that nodes form dense communities, and a short average node distance indicating that information flows quickly. These two properties define a “small world” network, a term borrowed from Milgram’s (1967) experiment, which suggested that, on average, only six intermediaries are needed to connect two randomly selected people in the United States.

To position a network between the theoretical extremes of a random network, in which connections are distributed randomly, and a regular network, which has an ordered geometric structure (such as a grid or ring), Watts and Strogatz (1998) compare two indicators. For any network, let L be the average geodesic length and C be the clustering indicator. Add the index r for a random network. Let λ be the ratio C/C_r , γ be the ratio L/L_r , and α be the ratio λ/γ . Humphries and Gurney (2008) demonstrate that a network is statistically a small world when α is superior to 1. When L and C greatly exceed L_a and C_a , respectively, the network is regular. We use the two indicators L and C to qualify networks “m,” “p,” and “c” and test their robustness. The process takes place in three stages. First, we extract the giant component for each network and then rank its nodes in descending order of weighted betweenness values. Next, we apply the link addition procedure shown in Figure 3 to each node in turn, following this list. At each iteration, a single additional actor is assigned the probabilistic connections linking its second-rank neighbors. Finally, after each addition, we recalculate L and C to determine if the discovery of latent links moves

the graph toward the “small world,” random, or regular domains. This check is essential because the effectiveness of a targeted neutralization strategy varies significantly depending on the target network’s structural category.

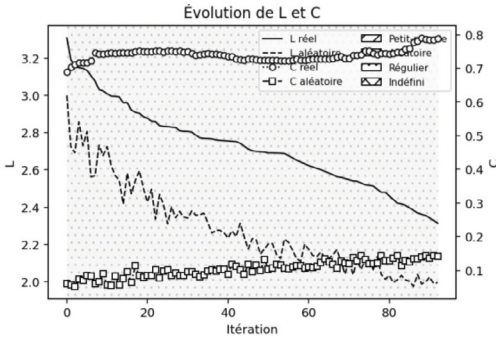


Fig. 4a. Robustness of the “m” network

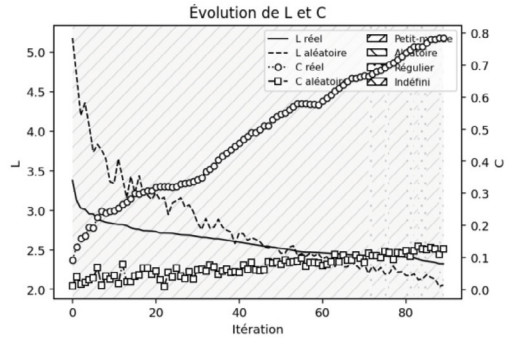


Fig. 4b. Robustness of the “p” network

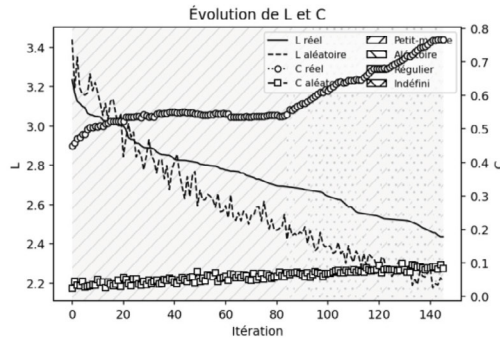


Fig. 4c. Robustness of the “c” network

Figure 4. Robustness of “m,” “p,” and “c” networks with hidden links

Reading. The x-axis of the graphs represents the addition of probable links node by node (“iteration”) not identified by the police data (a maximum of five). The order in which the nodes are processed depends on their weighted betweenness centrality, starting with the highest scores. The y-axis indicates the values of L and C for these extended networks. For the “p” and “c” networks, the L values are sometimes higher in the random configuration than in the real configuration. This means that the presence of strong hubs creates additional shortcuts compared with the random reference graph. As long as the value of alpha remains above 1, the term “small world” remains valid in this case. The nature of the network (“small world,” random, regular, undefined) appears as a background texture.

Figure 4 summarizes the effect of gradually adding missing links to the three studied networks. The meetings network (“m”) exhibits characteristics of a regular network from the beginning and does not change over the course of the iterations. The phone calls network (“p”) initially corresponds to a “small world” network, but as the number of iterations approaches seventy, it also adopts the

profile of a regular structure. The combined network (“c”) behaves similarly to “p.” In other words, a realistic extension that is limited in number and concentrated on the most central actors identified by the police investigation does not change the structural category. “m” remains regular, while “p” remains, in principle, a “small world.”

This observation has practical implications. A “small world” reacts strongly to the targeted removal of nodes with high betweenness. Average distances increase, and the structure quickly segments into virtually isolated components. In network “p,” this strategy remains effective even if a significant volume of links escaped investigation. Conversely, a regular network is more resistant to targeted attacks because all nodes play roughly the same role with more homogeneous betweenness. Consequently, the list of actors deemed “most central” lacks discrimination, and eliminating these members is almost acting at random. Therefore, it is necessary to arrest much more broadly to achieve a comparable level of fragmentation.

As we noted in the previous section, the giant component of “m” splits more slowly than that of “p” when nodes are removed in descending order of betweenness. The simulation presented here confirms and accentuates this difference because adding latent links reinforces the regularity of “m” without altering the structure of “p.”

Regarding the Calabrian mafia network, Calderoni and Superchi (2019) point out that the resilience of a criminal organization depends on technical limitations, such as incomplete police coverage and fragmented data, as well as social factors related to internal relations between its members. However, we find their argument about the complementarity of channels to be the most interesting: the phone calls meet an imperative of efficiency, while face-to-face meetings satisfy a need for security. The coexistence of these two communication methods explains why the organization is resistant to attempts to dismantle it. The simulations conducted here support this idea: the observed robustness persists even when technical biases are neutralized by reestablishing plausible links. This proves that the organization’s strength lies primarily in its dual architecture.

Conclusion

Although social network analysis is a valuable tool in the fight against organized crime, it also highlights the limitations that certain criminal structures impose on targeted arrest strategies due to their very organization.

This work focused on the organizational dimension, specifically the connections members establish with one another via various communication channels. However, SNA techniques can be applied to other contexts. For example, they can be used to map international drug flows, where each state becomes a node and each trade route a link. Giommoni et al. (2017, 2022) provide examples of this, such as heroin (2017) and, more recently, cocaine and heroin (2022). These authors demonstrate that routes are not chosen at random.

These commercial networks are represented by weighted and directed graphs, which complicates the interpretation of centrality and overall topology. Three additional concepts come into play in network topology: “Dependence,” which refers to a hierarchical orientation of flows; “interdependence,” which is linked to a more circular flow of goods; and “dominance,” the driving force behind flows, which is defined according to supply (outgoing flows) or demand (incoming flows). In such a framework, Katz-type indicators, which are based on all paths, are more relevant than local measures. The term “influence” is often used instead of “centrality.” However, this terminology, originating from international economics and input-output analysis, is not yet widely accepted in the SNA literature.

There are numerous theoretical and operational extensions that must be explored to adapt the SNA to the specific characteristics of drug trafficking and strengthen the effectiveness of anti-drug policies.

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“Houston, We Have a Problem”: The Paucity and Promise of an Empirical Space Criminology

Yarin Eski

ABSTRACT

Space as a hyper-commercial and advanced technological domain, as well as the expanse beyond heavenly bodies and their atmospheres, attracts various crimes and harms. Space criminology should address criminological empirical gaps in the study of space crime and its control, forming a pioneering before-the-act empirical space criminology that comprises uncharted territory, as crimes in international waters, airspace, and cyberspace once were. Unlike after-the-fact criminologies of maritime, aviation, and cybercrime, space criminology could proactively study space crime. Space’s specific challenges of microgravity, radiation and the absence of Earth’s borders and enforcement leads to this article’s main question: How are criminologists supposed to do empirical work on space crime and its control, despite physical limitations and inaccessibility to space? To answer that question, this article will explore the possibilities of using science fiction (hereafter sci-fi), astronaut analog missions, and Virtual Reality (VR) to set the agenda for an empirical space criminology.

Keywords: space crime, space crime control, space criminology, methodology, empirical turn

1. Introduction

Space, in the contemporary imagination, predominantly comprises sci-fi movies, rockets to the Moon, and more recently, NASA’s Mars Rover expedition, the James Webb Telescope pictures, and human-missions to Mars, like the one that forms the center of Elon Musk’s SpaceX program. Generally, we look up to the stars and marvel about space exploration, deriving meaning from it and hoping for a better future off a climate-changed, doomed Earth (Dunnett et al. 2019; Lasch, 1979). Space could have the potential to unite us outside of Earth where we “no longer dream of overcoming difficulties but merely of surviving them” (Lasch, 1979: 49). A recent survey on U.S. attitudes (N=10.329) toward space shows monitoring asteroids and studying the climate as top priorities. Space tourism is ex-

pected to become routine traveling for 55% of U.S. adults, yet only 35% want to orbit Earth, and private space companies receive mixed reviews, as 70% of them consider companies to be responsible for space debris (Kennedy & Tyson, 2023).

Next to being hopeful, and in a practical manner, space is vital for daily (digital) life on Earth (ESA, 2022). Society depends on satellite-based real-time data use (e.g., navigation applications), used as well for climate change control, such as monitoring of flooding, draughts, fire dangers, crop failures, nitrogen “greenhouse” emissions, food-water-energy nexus dangers, earthquakes, volcanic activity, and asteroid and comet hazards (AGU, 2017–2019). Willfully destroying satellites has direct, large-scale harmful effects on Earth. Satellites are also crucial in global warfare, such as the Ukrainian military that may have used SpaceX’s Starlink satellites to attack the Russian army, which has been denied by Elon Musk (Reuters, 2023). So, undeniably, space is a vital venue for international (political) conflict (e.g., Russia’s 2022 exit from the ISS), war, and harm back on Earth (Rothe & Collins, 2023).

Although in literature it is generally discussed how space enables warfare (Klein, 2012; Lupton, 1988; Rothe & Collins, 2023), whether space may enable crime—and is therefore criminogenic—remains a question that is virtually unaddressed. The idea that, for example, astronauts could commit a crime (Gohd, 2020), or how NASA and the European Space Agency (ESA)’s plans to return Martian rock samples to Earth in the 2030s (with Martian microbes) could harm our planet by contamination causing another pandemic (Stuart, 2022), are possibilities not yet given the same amount of scrutiny as space war has received (e.g., Hirst, 2005). In fact, space crime, ranging from interpersonal everyday volume crime, such as violence, robbery, theft, assault, rape, and murder in space, to existing environmental crime, such as space debris, have received little attention in public debate, in law and specifically in criminology, making criminological knowledge on space crime and its control scarce (Eski, 2023a/b/c; Lampkin & White, 2023). Moreover, an empirical space criminology is non-existent.

Therefore, from a criminological starting point (cf. Farinha et al., 2023; Kruse & Svendsen, 2017; Matti et al., 2023; Van Dasselaar et al., 2023), the aim of this article is to conceptualize and identify possibilities for a *before-the-act* space criminological empirical endeavor that addresses space as a highly commercial and hyper-advanced technological domain that is prone to all sorts of crime and is thus ripe for new evidence-based crime control initiatives. By focusing on how a theory-informed space criminology can comprehend space crime and its control empirically, this article addresses the question how criminologists are supposed to do empirical work on space crime and its control, despite the physical limitations and inaccessibility of outer space? To answer that question, this article will explore the possibilities of using science fiction (hereafter sci-fi), astronaut analog missions, and Virtual Reality (VR) to set the agenda for an empirical space

criminology. This article shall first discuss the current empirical lack of space criminology and possible reasons for it. Afterward, it will be discussed what the empirical impact is that space criminology could have, followed by an overview of which methodological opportunities there are to “get to space.” This article will be concluded with a consideration of the wider (theoretical) applications of an empirical space criminology.

2. What Is Out There? Some Considerations on the Lack of Empirical Studies on Crime in Space

“What constitutes space crime?” is in and of itself a novel question, and difficult to answer when that answer is to be grounded in empirical evidence, if only because there are no (known) official records of space crimes. If anything comes up in the imagination, it is the Challenger disaster that killed the entire crew of seven astronauts on January 28, 1986, being the first fatal spaceflight, as well as one of the first cases that has been theorized by criminologists as state-corporate crime (Kramer, Michalowski & Kauzlarich, 2002). However, it was not a crime *in* space as such.

The first known crime in space, in the strict sense of the word, may have almost happened when in August 2019, U.S. astronaut Anne McClain, while operating from the International Space Station (ISS), allegedly gained unpermitted access to her ex-fiancée Summer Worden’s bank-account (Baker, 2020). However, NASA investigated and the accusations turned out to be baseless (Marshall, 2023). Nevertheless, the McClain-case revealed numerous legal (definitional) issues regarding space crime, notwithstanding the existence of the 1967 Outer Space Treaty, the 1968 Rescue Agreement, the 1972 Liability Convention, the 1976 Registration Convention, the 1979 Moon Treaty, the 1998 ISS Agreement, the 2021 U.S. Tenets of Responsible Behavior in Space, and the 2022 Astra Carta Charter (Sustainable Markets, 2023). And although space *safety* is being addressed by extending aviation laws to regulate commercial human spaceflight safety and proposing legal amendments related to lunar activities (Foust, 2023; Ravisetti, 2022), specific space criminal laws remain absent. In fact, as it stands, different space agencies, including NASA and ESA, are not publicly vested in, nor have they made explicit the urge for generating scientific knowledge on (criminogenics of) space crime. This can be considered remarkable, given the rise of space tourism that will bring (more) civilians in space (Chang, 2015; Crouch, 2001; Reddy, Nica, & Wilkes, 2012), which has implications for safety and security onboard spacecraft (Koller, 2022; Kramer, 2023), as well as that during human-missions to Mars, harmful behavior could arise and threaten such missions (Szocik, 2019; Szocik, Campa, Rappaport, & Corbally, 2019).

Legal scholars have considered space in relation to crime, (the lack of)

criminal law, justice (courts) and in-space jurisdiction since the 1960s (Diederiks-Verschoor, 1967, 1979; Gorove, 1972a/b; Haughney, 1963), and more recently, legal scholarship on space crime is expanding (Sachdeva, 2023). There is, however, no robust criminological paralleling of legal scholarship on space crime or its control. Space crime is simply not yet a serious, mainstream criminological concern, as recent criminological literature points out (Eski, 2023a/b/c; Eski & Lampkin, 2025; Lampkin, 2021, 2020; Lampkin & Wyatt 2023, 2022; Lampkin & White, 2023; Takemura, 2019), whereas over two decades legal scholars have proposed to study space crime (Chatzipanagiotis, 2011; Gorove, 1991; Potter, 1995; Robinson, 1974; Sgrosso, 1998).

In fact, concerns about the rise of different, specific forms of space crime have been expressed, such as earthly crimes in or via space, including unauthorized satellite use (Potter, 1995); “drugs in space” (Tatum, 2020); and space piracy, hijacking, and non-terrestrial terrorism (Emery, 2013; Miller, 2019). Furthermore, the space crime lens could be broadened to include dangers and harms related to human-missions to, for example, Mars when spacefarers who are living in confined spaces may suffer from (mental) health issues that can cause (violent) transgressions, crime, and suicide (Axpe et al. 2020; Robinson, 1974; Patel et al. 2020; Szocik, 2019). Environmental crimes affecting pristine space milieus form a topic of scientific scrutiny by criminology too, such as the issue of extraplanetary debris through (disabled) satellite, or other floating “space junk” (Eski, 2023a; Bradley & Wein, 2009; Lampkin & White, 2023) and the phenomenon of (commercial) space mining (e.g., lunar/Martian eco-theft) (Durrani, 2018; Milligan, 2015). Not necessarily defined as a space crime in the strict sense, but relevant to consider as well, are extraterrestrial-biological and anthropogenic damages. These include (unintended) physical harms caused by microgravitational effects on the body, like deterioration of bone tissue (osteoporosis) or human enhancement medicines that prevent may such health issues but could make it impossible to return to Earth due to fundamental changes to the body (Szocik et al., 2019). Human activity can be in and of itself harmful when considering interplanetary microbial, organic contamination due to retrieval missions, like NASA’s OSIRIS-Rex mission that visited, collected and returned a sample from asteroid Bennu to Earth on September 24, 2023 (Witze, 2023), or because of returning space crews (cf. Bianciardi, 2022; Chan et al., 2020; Lampkin & Wyatt, 2022; Van Houdt et al., 2012).

The public and scientific inattention for space crime could be explained by how we rather imaginatively stick to optimistic dreams about living *outside* Earth (Billings, 2007) than consider negative realities that include space colonialism, unequal access to space and narrow-minded technological solutionism (Popper & Rakotoniaina, 2019). As such, space crime can be regarded a negative imaginary/reality as well—a negativity that defies the space optimism that sustain by neoliberal political-economic thinking (Dickens & Ormrod, 2008). To acknowl-

edge space crime, in that sense, could automatically be seen as a critique on the state-corporate harms caused by, for example, NASA and SpaceX.

It is also the (politics of) space optimism that brought about a hyper-commercialized space industry that will generate more than U.S. \$1 trillion in revenues by 2040 (Morgan Stanley, 2020). The space industry ranges from tech-billionaires and their commercial spaceflights to small space start-ups that deliver solutions to the most pressing questions (Space Capital, 2022), such as simulating human-missions to and living on Mars (Dass, 2017), and by creating oxygen and food under conditions resembling the harsh environments of space and other planets (Canon & Britt, 2019; Hoffman et al., 2022). Moreover, international space agencies (e.g., NASA or ESA) are commercializing through public-private space investment, or “space biz” (Christensen et al., 2017; Clark et al., 2014; Gregg, 2021).

Given the space industry’s anticipation of economic advantages that are derived from rapid space tourism growth, serious investments are likely to be made in enabling more people to enter space, which consequently should require “laws reflecting the same type of scenarios that are encountered sometimes on Earth” (Gorove, 1991: 46). As a result of the growing number of people in space, the risk of (more) crimes in space increases (Crouch, 2001; Chang, 2015; Gorove, 1991; Reddy et al., 2012). Yet to this point criminology, unlike legal scholarship, remains slow and only conceptually oriented on space crime (Lampkin & White, 2023), and it has not conducted empirical research on space crime yet (Eski, 2023d). Such a lack could be especially problematic because space optimism not only sustains unawareness of space crime (Billings, 2007), but has also been considered to additionally cloak narcissist Earth-escapism (Ormrod, 2007) and exploitation of natural resources in space environments to be used up on Earth (Eski, 2023c; Lampkin & Wyatt, 2022). For example, on 13 October 2023, NASA and SpaceX launched a solar-powered spacecraft on a 2.5 billion miles journey to the asteroid belt between Mars and Jupiter to target asteroid 16 Psyche that has an unusual iron-nickel composition, potentially worth U.S. \$100,000 quadrillion (Carter, 2023; Donaldson, 2023). The harmful environmental consequences of extracting mineral from meteorites or asteroids, such as 16 Psyche, to be used back on Earth, have not been regarded as crimes (Lampkin & McClanahan, 2023).

Since the alarming signs of climate change (IPCC, 2022), there has been especially a lot of public concern about narcissist escapism of neoliberal space leadership (Vdovychenko, 2022), seemingly reflected in Elon Musk’s, but also Amazon’s Jeff Bezos’ and Virgin’s Richard Branson’s Billionaire Space Race, according to Kern (2021). There is wide-spread critique on “the rich [that] are planning to leave this wretched planet” (Marikar, 2019—online source). This suggests that the powerful—often responsible for climate change-related ecocide (White, 2022)—may escape both the consequences of climate change on Earth, enjoying impunity, while continuing harmful and (eco)criminal acts in space and on other planets; harmful

space corporate activity that is presented as socio-technological optimistic solutionism (Tutton, 2021) and remains unpunished as there is no space policing and criminal justice system (Eski, 2023c; Froehlich, 2021; Szocik et al., 2020). Within the international astronaut community concerns have been raised by Dutch astronaut André Kuipers, who worries that “with entrepreneurs at the helm of new space companies, one may wonder where they will lead us. Let us hope that they don’t get so big and powerful that they start making their own rules in space” (2022: 22).

The anxiety about how space could allow for unbridled space ecocrime, white-collar lawlessness, and criminal impunity to flourish, is not unrealistic. The fact that powerful entrepreneurs consider space as a legal vacuum became apparent when on October 28, 2020, SpaceX released its Starlink Terms of Service for their broadband mega-constellation to provide global internet connectivity. The following is from the “Governing Law” section of those Terms of Service:

Services provided to, on, or in orbit around the planet Earth or the Moon will be governed by and construed in accordance with the laws of the State of California in the United States. For Services provided on Mars, or in transit to Mars via Starship or other colonization spacecraft, the parties recognize Mars as a free planet, and that ***no Earth-based government holds authority or sovereignty over Martian activities***. Accordingly, disputes will be settled through self-governing principles established in good faith at the time of Martian settlement (Starlink, 2024 – online source, emphasis by author).

Before-the-act space criminological empirical studies would not operate in a complete vacuum of insights. Several international emerging efforts to establish and regulate space safety and security exist. In 2023, the (1959) UN Committee on the Peaceful Uses of Outer Space (COPUOS) started to discuss new rules for peaceful, safe, and sustainable space exploration, which for the first time included space debris management, a joint traffic system in space, and monitoring space weather (NSO, 2023). In December 2023, the U.S., UK, and Australia announced their plans to bolster space monitoring by ground-based radars to enhance space domain awareness, encompassing technologies, autonomous systems, AI, quantum technology, and industry partnerships, particularly aimed at countering China (Khalaf, 2023). Also, Canada amended its criminal code to account for crimes on the Moon (Ravisetti, 2022). Most recently, Dish Network, a U.S. telecommunications company, has been penalized \$150,000 by the U.S. government for not properly disposing of a satellite and for violating the Federal Communications Commission’s (FCC) anti-space debris rule, which regulates satellite waste in space. This marks the first-ever space debris penalty imposed (by the FCC) (Clayton, 2023), but it is not based on an existing specific space (criminal) law. COPUOS has

a long history of negotiating what later became international treaties dealing with outer space, mentioning criminal jurisdictions challenges (Ireland-Piper & Free-land, 2020). However, these treaties and international agreements (e.g., the Space Station International Agreement of 1998) have not codified “space crime” specifically and have not brought about an actual space criminal law enforcement (cf. Marshall, 2023). Hence, different challenges remain, and specific space criminal law regulations are still non-existent (id.), which makes its legal certainty based on only one nation’s legal enforcement and not on that of internationally agreed on legislation.

As noted above, the Canadian government enabled prosecution of crimes committed by Canadian astronauts on the Moon (Thrower, 2022). Other countries and space agencies have not followed suit, whereas space crime awareness and control are essential for spacefaring crews’ well-being, knowing what acceptable human behavior and which available responses exist, which should “be clearly defined before a spacecraft leaves Earth” (Seshagiri, 2005: 478). There is thus a need for space crime knowledge to deliver appropriate mechanisms for promulgation, enforcement, and administration “to manage the space environment to control and deter criminal action” (Doyle, 1990: 130). Moreover, existing and to be installed authorities should explore possibilities to deliver an international (and interplanetary) criminal code to tackle space crimes, for which that code’s administration, enforcement, and jurisdiction ought to be agreed on (id.). It could assist in discovering what behavior should (not) be criminalized and controlled, without endangering a space mission (Newman, 2016). Moreover, it is vital to discover which morals, ethics and politics would organize life in space and on other planets (Szocik et al., 2016) in relation to harm and crime (control), especially because the mode of life(style) and behavioral problems may very well be completely different from those (experienced) on Earth (Hermida in Mejia- Kaiser et al., 2006).

Criminology, as a governance and policy-advising discipline, has a vital role to play codification of interplanetary criminal justice and policing systems. A serious space criminological *empirical* follow-up could ignite more mainstream criminological interest in space crime and its control by filling in the gaps and learning from legal scholarship. Space law scholars expressed before their concerns about how long-term human settlements in space and other planets cannot be regulated by contemporary criminal jurisdiction rules in space (as founded in the ISS Agreement) in the future. Space criminology should do so critically, because the legal focus on space has been criticized for being too narrow and merely focusing on the ISS and not on other extraterrestrial environments (Lampkin, 2020: 240). That critique itself, however, remains conceptual, and is therefore itself limited as it focuses the criminological scope predominantly on environmental space crimes, including space debris and rocket emissions pollutions.

Space criminological *empirical* research could assist space criminal law-

making and “construct[ing] a new rule for the life there” (id. 430) by including both the legal and (green) criminological foci, as well as by including the more traditional criminological topics of research (theft, assault, murder, rape, and other similar kinds of volume crime, as well as white collar crime) next to environmental space crime. But how are criminologists supposed to do empirical work on space crime and its control?

3. Criminology among the Stars: The Promise of an Empirical Space Criminology

Avoiding how criminology was once very slow to develop *after-the-fact* research on maritime, aviation, and cybercrime (cf. Eski & Wright, 2023; Dekker, 2011; Jaishankar, 2018), space criminology has the potential to pioneer, not by awaiting the first space crime as an after-the-fact criminology, but by pro-actively working toward a *before-the-act* critical and *empirical* space criminology.

Space, as a novel topic for social scientific study in general (Salazar & Gorman, 2023), had groundbreaking effects on anthropology, vis-à-vis space anthropology (cf. Masali et al., 2010; Messeri, 2016) and on sociology, vis-à-vis space sociology (cf. Dickens & Ormrod, 2007). Gearing criminologists toward an empirical space criminology, may have a fundamental impact on criminology by founding a new strain of criminological research to theoretically, methodologically, and empirically discover what (the origin of) space crime and its criminogenics are, how it manifests and damages, and how it can be feasibly controlled. As such, an empirical space criminology has the potential to deliver theoretical and methodological innovation and fundamental epistemological advancement on a deeper level for (critical and green) criminological debates.

Space criminology would not work in a criminological vacuum, yet criminologies of space crimes may require (completely) different theoretical and methodological adaptations and advancements, as well as interdisciplinary integration of other disciplines that are unfamiliar for criminology, such as the space sciences that includes aerospace engineering, astrobiology, astrochemistry, astronomy, astronautics, astrophysics, cosmology, planetary science and space anthropology, space archaeology, space philosophy, space psychology and space sociology.

Space criminology can, therefore, have discipline-altering impact, especially by delivering foresight-orientated criminologies of a domain with its own unique criminogenic characteristics, as the sea, air and cyberspaces contain. Space is inherently differently structured compared to Earth, having a fundamentally different level playing field in several ways, including microgravity, unfiltered radiation, and different chemically composed atmospheres (e.g., no oxygen) (e.g., Atomi, 2015; Nelson, 2016; Strey, 2019). These differences are (often lethally)

harmful to human beings, which necessitates living in air-tight, usually very small and confined living conditions with limited nutrition in order to survive the harsh conditions of space (Williams et al., 2009); living conditions that themselves create psychological stress, frustrations and interpersonal disagreements among space crews (Dunn Rosenberg et al., 2022; Laham, 2023; Sucamele, 2021), potentially leading to on-mission harmful conflict. Additionally, national borders do not exist, and it remains unclear which authority—*back on Earth*—is legally and practically capable of being responsible for enforcing legal compliance (Li, 2020). In fact, space has virtually no borders and is considered potentially limitless; it is not entirely sure where or whether the universe ends (Sutter, 2018), creating all sorts of legal uncertainties (Schladebach, 2018). Such limitlessness can be in and of itself criminogenic, considering that, for example, astromining companies explain they extract lunar, Martian, and other cosmic bodies’ natural resources because there is not scarcity; they assume there are infinite space natural resources, which would justify unbridled exploitation of space resources (cf. Lampkin & McClanahan, 2023).

Slightly similar to cyberspace, Earthly (“normal”) time and space constructions do not hold for space. Off-planet, there is no day or night. For example, the ISS orbits Earth at 27,600 km/h, completing an orbit every 90 minutes, which provides astronauts with sixteen sunrises and sixteen sunsets in 24 hours (Raveendran, 2023). Moreover, a Mars-day, for example, is slightly longer than an Earth-day, by 39 minutes and a Mars year has 687 Earth days (The Planetary Society, 2023). An empirical space criminology would have to account for the influence of such characteristics on crimes in space, while having to find epistemological, theoretical, and especially methodological ways to attune itself to those characteristics.

Because, what makes space a groundbreaking new domain for empirical space criminological scrutiny, is simultaneously what makes it extremely challenging to study space crime and its control. Put simply: detaching yourself from Earth’s gravity costs money, making direct criminological fieldwork in space nigh impossible (for now and in the near future, at least). Unless you participate in a free going-to-space ticket competition, as Virgin Galactic once held, costs of going to space for a couple of days could reach \$55,000,000 (Carter, 2021). Therefore, as realistic as possible alternatives and affordable alternatives are required to study space crime and its control.

On top of that, the space community off- and on Earth resides in a closed culture (Schwartz, 2005; Vaughan, 1996) and can therefore be considered a hidden and hard-to-reach community (cf. Ellard-Gray et al., 2015). In the broadest sense, the space community contains many interconnected public-private sectors, actors, and organizations (Bromberg, 2000), the most well-known actor being the astronaut. Equally important are, but not excluded to, ground segment and space port personnel, space equipment developers and manufacturers, space (technological)

engineers and researchers, spacefaring instructors, space medicine and nursing experts, space legal experts and space policymakers (cf. Ronci, 2019). Due to the rise of space commerce, all (future) space tourists, space industrial leaders (e.g., Musk), space corporations, investment and start-ups, and the related branches (Space Capital, 2022) are now also included in the space community. Altogether, it leads to the fundamental question an empirically oriented space criminology must tackle first: how close can we get?

4. Getting as Close as Possible: Space Crime Sci-Fi, VR, and Analog Missions

Given how VR and analog astronaut environments are used already to study group cohesion and loneliness in space (Rai et al., 2012; Berger, 2023), as well as that augmented reality aids astronauts (Keller, 2023), space criminology could start to create and study space crime VR environments and astronaut analog missions that include space crime scenarios, allowing criminologists to come as close as possible to space crime, in an as immersive as possible manner—a methodological innovation that has the potential to advance criminology in an important way. VR and analog missions are scenario or script-driven (e.g., Chtereov & Panero, 2021; Dragoni, Ghidini, Busetta, Fruet, & Pedrotti, 2015; Imhof, Hogle, Davenport, Weiss, Urbina, Røyrvik, ... & Nottle, 2017), which means that, first of all, space crime and its control scripts must be created, because these form the base for VR and analog space crime studies.

4.1 Sci-fi based imagining and scripting of space crime and its control

Social scientists study the contemporary by considering the past and/or by analyzing “the now,” but rarely by studying the future (Hajer, 2017). However, doing research with and on fictional expectations (Beckert, 2016; Hancock, 2017) allows researchers to empirically orientate on a multitude of different actors who make decisions with high uncertainty that are based on “collectively held and performed visions of desirable futures” (Jasanoff & Kim, 2015: 12).

Resembling how sci-fi content can inform space diplomacy (Swiney & Dickey, 2023) and ESA’s 2001 study “Innovative Technologies from Science Fiction” (Battrick & Warmbein, 2001) that used science fiction literature to offer forward-thinking technological concepts for realizing current or near-future technology, space criminology could engage in the study of imaginations of the earlier mentioned international space community regarding space crime and its control, through sci-fi analysis-based interviewing and questionnaires, and also perform expert interviews with space sci-fi (cf. Weaver, 2010), leading to a future-oriented, interpretative understanding of their (shared) imaginaries of space crime and how to control it. It could also reveal which fictional expectations carry more (dis-

cursive) authority or legitimacy than others and why that is the case (id.). Hajer (2017) argues that those imaginaries make it possible to develop new knowledge, and in this case, space criminological knowledge.

The suggested criminological imaginative reconnaissance of possible (future) space crimes and their control is necessary, again, because officially, space crime—at least in the strict sense, arguably—has not happened yet. The next best option is, therefore, to interpretatively comprehend space crime (control) by relaxing the cognitive restrictions of space criminology’s anticipated research populations by stimulating a (new) understanding of different trajectories and approaches to space crime through the use of sci-fi prototyping (cf. Burnam-Fink, 2015; Merrie et al., 2018; Johnson, 2022; Schwarz, 2014). Space criminology would not be the first branch of research to apply sci-fi prototyping. There is a strong synergy between popular sci-fi and real-world scientific research and development, in particular regarding technological and computational studies, as well as business and military studies (Augé, 2021; Bell et al., 2013; Jordan et al., 2016; Mubin et al., 2016; Popper, 2015).

Sci-fi prototyping leaves from the premise that sci-fi ruptures with “established truths and knowledges,” to unfold “societal and ideological structures that ground the reality one knows and understands,” making sci-fi to function as a “crowbar against conventional reality” (Hellstrand, 2015: 1). Using a sci-fi lens would enable space criminology to provide realistic speculation about possible future events [i.e., space crime (control)], based solidly on adequate knowledge of the real world, past and present, and on a thorough understanding of the nature and significance of the scientific method through which “the improbable [is] made possible” (Heinlein in Joy, 2021: 235). For space criminology, “science fiction [functions] as a constructive lens for developing scenarios [...] to explicitly explore nonlinear change and the intertwined dynamics of;” in this case, space crime and its control (Merrie et al. 2018: 23).

What happens if your glove gets stolen and you are not able to perform your task outside a spacecraft or what if the life-support system is sabotaged? (Johnson, 2019). To which extent does living and working in a confined space with truly no breathable air outside a lunar base allow for (acceptance of) certain interpersonal violence and harm, such as sexual assault? (Santaguida & Lapierre, 2022). There is then literally nowhere to go, but how are you supposed to still interact with the aggressor afterward? Where are the police, who will be at all policing (aboard) spacecraft, and how to prosecute a space crime and where? (Seshagiri, 2005). Which courts will be available to try and penalize space crime? (Casey, 2022; Sagdeva, 2021; Szocik et al. 2016). Can this be done in a digital at-a-distance court (cf. Swierczynski, 2022) on Earth, and would that constitute a fair trial of a space crime? To which extent is spacefaring being served best by individuals capable of self-policing and punishment? (Taubenfeld, 1961–1962). These are but a few ex-

amples of questions amongst many more on space crime and its control through (self-)policing, as well as on prosecution and punishment, that have been asked theoretically but have not received serious empirical consideration by the space community, or mainstream criminology.

Sci-fi triggering the imagination of the space community regarding space crime (control) matters additionally because only 676 people have been in space (Hobbs, 2023) and currently at this time of writing there are 14 people in space (WhoIsInSpace.com, 2025), and again, space crime—narrowly defined—has not manifested itself yet (Williams, 2021). It altogether makes the research population that has been in space extremely small and even more hidden. That means that the larger share of members of the space community have not been in space, which requires the triggering of the imagination of space crime (control) by bringing not bring them to space, but space to them (cf. White & Smith, 2013). In doing so, space criminology could parallel earlier work by Szocik et al. (2020) who provided imaginations of what a Martian Criminal Justice System may look like and what types of crime could be encountered on Mars in the future. Such “future gazing” has become common in both science and the industrial sectors, especially by using focus groups (Cooper & Baber, 2002; Hancock, 2017).

Resembling the vignette method (De Goede, 2020; Humphreys, 2005), sci-fi prototyped vignettes can be used by space criminologists as succinct stories that act as a lens through which research participants can perceive in “some of the pleasure and pain” of the study’s subject in question (Humphreys, 2005: 842). They offer the opportunity to make visible what normally remains invisible in research (De Goede, 2020: 2). Sci-fi vignettes portraying space crime (control) can focus on interaction between past experiences, perceptions of the current state of affairs, intelligence of (the activities of) others and the estimation of what these aspects reveal when integrated into a shared imagination that is then projected onto the contemporary landscape (Hancock, 2017), in this case, of space crime (control).

4.2 Integrating and studying VR and analog mission space crime (control) scripts

The gathered imaginations could form the basis for “the development of sharing of scenarios” that go “beyond the aggregation of individuals’ opinions” (Cooper and Baber, 2002: 139) to eventually design space crime (control) scripts that can be integrated into VR and astronaut analog mission environments, following crime scripting practices of criminology and crime policymaking (cf. Cornish, 1994; Dehghanniri & Borrión, 2021).

Scripts allow their audiences to partially leave from “their existing world-view of short- term concerns to a broader conception of the future” (Burnam-Fink, 2015: 50), in this case of space crime (control). Leaving existing world(view)s is made possible by emerging in created VR and analog worlds and is especially rele-

vant for an empirical space criminology that aims to overcome the current impossibility of researching space crime (control).

First, by creating immersive space environments, participants are allowed to experience VR space crime (control) situations. VR technology enables the creation of various environments to study crime, including examining factors that deter burglars in neighborhoods (Van Sintemaartensdijk et al., 2021). Moreover, VR is increasingly being adopted for simulating space missions (Human Space Program, 2023), making it a logical choice for understanding space crime (control) proactively, meaning, before-the-act, as close as possible space criminological research can get.

In a VR environment with embedded space crime (control) scripts, it becomes possible to study how crimes and harms (and their feasible control) are taking place off- Earth, on spacecraft and other planets, in particular when using physiological measures to monitor the VR immersion into space crime (control) scripts (Van Sintemaartensdijk, 2025). The physiological data gauge the level of immersion and emotional engagement, in tandem with interviews immediately after the VR experience to understand participants’ perceptions, emotions, and comprehension of space crime (control) scenarios. This way space crime (control) VR can shed light on (group) mission behaviors (cf. Groemer et al., 2012; McMenamin et al., 2020; Rai et al., 2012), leading to, sustaining or being the result of space crime (control). The significance of VR extends beyond space criminological research, as it is already recognized as a crucial tool to counteract loneliness and boredom during actual space missions (Berger, 2023). Moreover, augmented reality, which involves overlaying virtual information onto the real world, has potential applications in aiding astronauts with tasks outside a spacecraft (Keller, 2023). Consequently, the use of virtually simulated environments represents an apt approach to comprehending space crime (control) phenomena empirically (Van Sintemaartensdijk, 2025).

Second, space crime (control) scripts can also be integrated in astronaut analog missions to subsequently study these missions that provide key insights into (group) mission behaviors (Groemer et al., 2012; Kaiser, 2025; McMenamin et al., 2020; Rai et al., 2012). For example, a script can allow for the study of biobehavioral and psychosocial aspects that can lead to mental harms, as well as conflict and interpersonal violence. In recent years, the number of analog missions is growing, including CHILL ICE II & I in Iceland, APICES in Spain, MINAR IX+ in the United Kingdom (UK), EMMIHS-III (HI-SEAS) in Hawaii, IGLUNA 2021 in Switzerland and M06 2023 (LUNARES) in Poland. Furthermore, focus groups with key stakeholders from the space community, in particular (analog) astronauts, space engineers, space safety and security experts, policymakers, and legal scholars, could ensure the accuracy and feasibility of the space crime (control) scripts for the analog missions as well as VR environments (or to be used for astronaut training purposes, for example).

5. One Small Step for Criminologists, One Giant Leap for Criminology: Implications of an Empirical Space Criminology

Space criminology must avoid going down a same path as philosophers of technology once did when attempting to take the empirical turn by predominantly evidencing their assumptions, while remaining overly abstract and pessimistic about future technologies (Bosschaert & Blok, 2023). Instead, the promise of an empirical space criminology lies within the possibility to get as close as possible to data on space crime (control), without losing sight of the inherently political nature of crime, space, and control in general, and thus also of space crime (control).

A viable way to assure that empirical promise, is to integrate criminological theory into the aforementioned VR and analog approaches, from which new empirical insights would result, also in new space criminological theory. Another way to guarantee the promise, is by working together with, and integrating space criminology in, other disciplines close to criminology that have already attempted to deliver empirical space sociologies, space anthropologies and space psychologies. It can also work more closely with the disciplines of space science with an empirical focus, including aerospace engineering, astronautics, astrophysics, and planetary sciences. By integrating criminology's methodological advancements in using sci-fi, VR, and analog missions, novel theoretical, methodological, and empirical insights into the realm of space crime (control) can be developed, expanding the boundaries of criminological knowledge and that of relevant disciplines on (how to research) crime in off-planet harsh, microgravitational and lawless settings.

Empirical space criminology may also enrich criminology with fresh, insights for shaping teaching programs and future interdisciplinary research in outer space to advance comprehension of space crime (control). Finally, an empirical space criminology could provide unique immersive contexts for studying, as well as deliver a knowledge-base about space crime (control) that can additionally provide valuable input to enhance space crime, safety, and security training, as well as related governance and effective lawmaking (cf. EEAS, 2023) to be implemented by space agencies and commercial spaceflight lines. Especially astronauts may benefit from learning about empirical space criminological findings, as they reside in space for extended periods in space stations and on human-missions to other planets.

However, these are all but promises yet. Although space criminology is not dormant anymore and in fact is gaining slowly but steady more momentum (cf. Eski & Lampkin, 2025; Lampkin & White, 2023), there must be advancement of its methodological capabilities and empirical understanding. Let this contribution be but a small step by a criminologist, but what could become a giant leap for space criminology.

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The Criminal Liability of Minors in France

Frédéric Archer

Senior Lecturer in Private Law and Criminal Sciences, Co-Director of the Institute of Criminology, University of Lille, CRDP-ERADP-ULR 4487.

“Such is the life of men, a few joys quickly erased by unforgettable sorrows. There’s no need to tell children.”

Marcel Pagnol, French academician (1895–1974)
Le château de ma mère (1957).

Marcel Pagnol authorizes us to lie by omission to children in order to preserve the innocence and carefreeness of their childhood. Minors do not have all the resources, or even sufficient capacity, to face up to the countless vicissitudes of life. They need to be able to face the future with a minimum of serenity. It was this need for protection that helped lay the foundations for the principles of juvenile criminal responsibility. However, as criminal law is a matter of public order, this protection is ambivalent, since it is aimed both at the minor who committed the act and, of course, at society as a whole. In criminology, the questions of criminal responsibility and its basis have been extensively debated.¹ Proponents of deterministic theories considered that the perpetrator was predestined to commit an offence either because of his physical characteristics² or because of the influence of his social environment.³ These analyses were not compatible with criminal responsibility based on free will and have always been greeted with profound hostility by jurists. Nevertheless, Enrico Ferri went so far as to propose a change in the basis of criminal responsibility, so that it would no longer be based on free will, but rather on the risk that the offender, in its generic sense, poses to society.⁴ Although this proposal did not succeed, it did contribute to the emergence of what were known at the time as penal substitutes, which were nothing more than the equivalent of the security measures we still know today. Enrico Ferri was always keen to chase down the dangerous⁵ state. One of the main aims pursued by determinists was to exclude the offender from conventional so-

1 A. Bauer, *Dictionnaire amoureux illustré du crime*, ed. Plon - Gründ, 2024, p. 72 et seq. - P. Morvan, *Criminologie*, 4thed. LexisNexis, 2022, n° 51 et seq. - R. Gassin, S. Cimamonti, Ph. Bonfils, *Criminologie*, 7thed. Dalloz, 2011, n° 202 et seq.

2 C. Lombroso, *L'Homme criminel*. Etude anthropologique et psychiatrique, Félix Alcan éditeur, 1887.

3 E. Ferri, *La sociologie criminelle*, 1893. Published in 1881 under the title *Les nouveaux horizons du droit pénal*, republished in 2004 with a presentation by Raymond Gassin by Dalloz in 2004.

4 P. Morvan, *ouv. préc.* n° 63 - R. Gassin, S. Cimamonti, Ph. Bonfils, *ouv. préc.* n° 221.

5 P. Bouzat, *Le centenaire d'Enrico Ferri*, RSC 1957, p. 1.

ciety. Offenders had not chosen to become delinquents, they were delinquents.⁶ It's as if humanity were made up of delinquents on one side and honest people on the other. What a utopia! In 1890, the work of Gabriel Tarde, a French magistrate, brought about a more rational debate.⁷ Although his theories remained causalist in nature, focusing on the causes of crime, he was the first to reintroduce the offender into society as a professional. His concept of criminal responsibility is particularly interesting, as he examines its generating element, which for him is none other than guilt. Man can only assume criminal responsibility if he feels guilty. To do so, he must have succeeded in building his personal identity by testing his ability to resist both internal and external influences and must have succeeded in integrating the values recognized and protected by society. He refers to this as social similarity. According to him, the more a person's personal identity is constructed, the more he or she is able to feel guilt and therefore be responsible for his or her actions.⁸ This criminological aside highlights the need to maintain a specific system of criminal responsibility for minors.

Are minors capable of deciding, choosing and thus assuming the consequences of their choices? Under civil law, the answer to this question is in principle negative, except in a few special cases where the law or custom allows the minor to consent alone.⁹ Criminal law, on the other hand, admits the criminal responsibility of minors in an attenuated form, provided they are capable of discernment. While Aristotle elegantly described discernment as the eye of the soul,¹⁰ the notion is generally presented, in a very Manichean way, as a person's ability to differentiate between good and evil.¹¹ Criminal law considers a minor to be capable of discernment when he or she has understood and intended his or her act, and is capable of understanding the meaning of the criminal proceedings to which he or she is subject.¹² Since the Apaches at the dawn of the twentieth century,¹³ the two world wars have largely contributed to the decimation of young people. Recognition of the specific nature of the criminal responsibility of minors gradually gained ground¹⁴ before being enshrined as a fundamental principle recognized by the laws of the

6 On the theories of the Positivist School: A. Bauer, *ABC de la criminologie*, éd. du Cerf, 2016, p. 99.

7 G. Tarde, *Les lois de l'imitation*, 1890, 2thed. 1895.

8 G. Tarde, *La philosophie pénale*, ed. A. Storck, 1890, p. 84 et seq. republished by Cujas in 1972, Chapter III: Théorie de la responsabilité, p. 67 et seq.

9 Ph. Bonfils and A. Gouttenoire, *Droit des mineurs*, 3théd. Dalloz, 2021, n° 1016 et seq.

10 Aristotle, *On the Soul*, translation by R. Bodéüs, GF Flammarion, 2018.

11 S. Jacopin, Présomption(s) et minorité en droit pénal. Entre fiction(s) et réalité(s), quels repères, *RSC* 2020, p. 27.

12 Art. L. 11-1 al. 3 CJPM.

13 A. Bauer, *Dictionnaire amoureux illustré du crime*, op. cit. p. 10 - A. Bauer and Ch. Soulez, *3 minutes pour comprendre, les 50 plus grandes affaires criminelles de notre histoire*, ed. Le Courrier du Livre, 2019, p. 64.

14 F. Archer, La réforme du droit des mineurs délinquants, *Dr. pénal* 2011 étude 24.

Republic by the Constitutional Court.¹⁵

The very existence of a system of criminal responsibility for minors, albeit a specific one, is proof of legal recognition of a degree of free will in them (I). It would then be to raise the subject to a higher level if we were to analyze the consequences of the presence of this notion of free will in minors, in particular, in the light of the Juvenile Criminal Justice Code (II).

I. Recognition of a Degree of Free Will in Juvenile Offenders

If the law recognizes the possibility of seeking criminal liability for a minor child, it is because it accepts that the latter can exercise a degree of free will in relation to his or her actions. The question of the basis for this assumption therefore becomes more acute. Indeed, although the ordinance of February 2, 1945¹⁶ did not contain any precision on this essential point, case law, and then the legislator, have preferred to retain discernment in this quest. However, the International Convention on the Rights of the Child favors a threshold of criminal minority. After outlining the perplexities encountered when faced with the formulation of a choice (A), we will see how the Code of Criminal Justice for Minors has positioned itself (B).

A. The Perplexities of Making a Choice

The Ordinance of February 2, 1945, contained no specific provisions on the grounds on which a minor child could be held criminally liable. Under this text alone, it was possible to hold an infant liable for having, for example, scratched a third party. Jurisprudence was established in the decision handed down by the Criminal Division of the Court of Cassation, known as *the Laboube* decision, on December 13, 1956.¹⁷ In this case, the Court took a position in favor of assessing the discernment of a minor child as a criterion of criminal responsibility.

On November 20, 1989, the United Nations General Assembly in New York unanimously adopted the International Convention on the Rights of the Child,¹⁸ which France ratified in 1990.¹⁹ Article 40 of this text states in its third paragraph: “States Parties shall promote the adoption of appropriate laws, procedures, authorities and institutions for children alleged as, accused of, or recognized as having infringed the penal law, and in particular : To establish a minimum age below which

15 C. Const. August 29, 2002, no. 2002-461 DC, *JO* Sept. 10, 2002; *D.* 2003, p. 1127, obs. L. Domingo and S. Nicot; *AJDI* 2002, p. 708; *RSC* 2003, p. 606, obs. V. Bück.

16 Ord. n° 45-174 of Feb. 2, 1945.

17 Cass. crim. 13 déc. 1956, n° 55-05.772, *Bull. crim.* n° 840, *D.* 1957, p. 349, note M. Patin ; J. Pradel et A. Varinard, *Les grands arrêts du droit pénal général*, 12thed. Dalloz, 2021, no. 43.

18 On this text: Ph. Bonfils and A. Gouttenoire, *op. cit.* n° 44 et seq.

19 Law no. 90-548 of July 2, 1990 authorizing ratification of the Convention on the Rights of the Child, *JO* July 5, 1990.

children shall be presumed not to have the capacity to infringe the penal law; To take measures, whenever possible and desirable, to deal with such children without resorting to judicial proceedings, it being understood, however, that human rights and legal safeguards must be fully respected.” The binding nature of this wording is open to debate. States parties must therefore “endeavor” to establish a threshold of criminal minority. The least that can be said is that, prior to the Code on Juvenile Criminal Justice, France had not made much effort in this direction. The law of September 9, 2002,²⁰ amending Article 122-8 of the Penal Code to include only the notion of the child’s discernment, to the exclusion of any reference to his or her age,²¹ may even be seen as a deliberate attempt to disregard the aforementioned provision of the Convention.

It may be noted that the various stages in the development of juvenile criminal law prior to codification did attempt to impose an age threshold. The Varinard commission²² proposed the age of 12 as a presumption of capacity for discernment. The 2009 preliminary draft juvenile criminal justice code²³ set the age at 13, thus aligning the age at which a minor’s criminal responsibility can be sought with the age of access to punishment. However, Madame Taubira’s 2015 proposal was to maintain the reference to discernment alone.²⁴ In the end, all these failed attempts at reform led only to piecemeal amendments to the Ordinance of February 2, 1945²⁵ without calling into question the absence of a threshold for criminal minority in our country. We therefore had to wait for the Juvenile Criminal Justice Code to see France “endeavor” to establish a minimum age below which children would be presumed not to have the capacity to infringe criminal law.²⁶

B. The Ambivalent Solution Proposed by the Juvenile Criminal Justice Code

Popular wisdom likes to remind us that to choose is to sacrifice. In the present case, it is possible to qualify the rigor of this statement. Article L. 11-1 paragraphs 1 and 2 of the Juvenile Justice Code stipulates that “*when they are capable of discernment, minors, as defined in [A]rticle 388 of the Civil Code, are criminally liable for crimes, misdemeanors or contraventions of which they are found guilty. Minors under the age of thirteen are presumed not to be capable of discernment.*”

20 Law no. 2002-1138 of Sept. 9, 2002 on the orientation and programming of the justice system, *JO* Sept. 10, 2002.

21 J.-F. Seuvic, *Droit pénal des mineurs*, RSC 2002, p. 867.

22 *Adapter la justice pénale des mineurs: entre modifications fondamentales et innovations raisonnables, 70 propositions*, Doc. Fr. Dec. 2009 (proposal no. 9).

23 F. Archer, *art. préc.*

24 E. Gallardo, *Présentation du projet de loi relatif à la justice pénale des enfants et des adolescents, un avant-projet de réforme, et après?*, *RDPD* 2015, p. 832.

25 E. Vergès, *Le nouveau parcours pénal des mineurs*, RSC 2020, p. 129.

26 Ph. Bonfils, *Réforme de la justice pénale des mineurs : une codification dans l’urgence? - Présentation synthétique du nouveau texte, Lexbase Pénal : dossier spécial n° 1 du 14 nov. 2019.*

Minors of at least thirteen years of age are presumed to be capable of discernment.” This text reconciles the consideration of discernment with a presumed threshold of criminal minority set at thirteen. Before the age of thirteen, the absence of discernment is presumed, but after the age of thirteen, the capacity to discern is. Despite the choice made by many countries, it does seem artificial to institute an age threshold without any reference to whether the minor has the capacity to discern. Age remains a criterion which does not always correlate with the minor’s degree of maturity.²⁷ It should also be noted that there is no consensus at European level between the countries that have opted for the²⁸ age threshold. In the past, the judge assessed discernment. With the Code de la justice pénale des mineurs, it’s the same,²⁹ except that he is now helped by a presumption attached to the age threshold of thirteen. The nature of this presumption immediately raises questions. An analysis of other provisions of the Code de la justice pénale des mineurs shows that it is a simple presumption.³⁰ The judge will therefore retain his or her discretionary power, based on discernment. Indeed, in view of this presumption, it is perfectly possible to prove the capacity for discernment of a thirteen-year-old minor. The change from the previous situation is therefore hardly perceptible. ‘122-8 of the French Penal Code still links a minor’s criminal responsibility to his or her capacity for discernment. The purpose of introducing this presumption based on an age threshold is therefore more to comply with France’s international commitments under the International Convention on the Rights of the Child. By introducing this reference to the age of the perpetrator, it would appear that France has “endeavored,” as required by the Convention, to establish a minimum age below which children will be presumed not to have the capacity to infringe the penal law. It should also be noted that the Convention itself refers to a presumption.

Despite the fact that France continues to take discernment into account, it now seems to be more in line with the³¹ Convention than in the past. Although it should be emphasized that only the introduction of an irrebuttable presumption

27 S. Jacopin, *art. préc.*: “There are major discrepancies between minors; some are more mature and act with full knowledge of the facts, while others are still just children.”

28 E. Gallardo, La nouvelle responsabilité pénale des mineurs délinquants: une perte de spécificité? *Lexbase Pénal*, special issue no. 1, Nov. 14, 2019 - S. Jacopin, *art. préc.*

29 Ph. Bonfils, Première approche du code de la justice pénale des mineurs, *AJ Pénal 2019*, p. 476 - Ch. Lazerges, Cohérence et incohérences dans l’ordonnance n° 2019-950 du 11 septembre 2019 portant partie législative du code de la justice pénale des mineurs, *RSC 2020*, p. 175.

30 J.-Y. Maréchal, *Cours de droit pénal*, 7th éd. coll. CRFPA, Enrick B éditions, 2024, p. 258 - E. Gallardo, *art. préc.* - S. Jacopin, *art. préc.*

31 B. Le Dévédec, Mineurs auteurs d’infractions sexuelles : les révolutions du Code de la justice pénale des mineurs sur le discernement et la césure pénale, *Enfances & psy*, n°92, June 2022, p. 109. *Contra* : Ch. Lazerges, De l’ordonnance du 2 février 1945 relative à l’enfance délinquante à l’ordonnance du 11 septembre 2019 portant partie législative du code de la justice pénale des mineurs, *Lexbase Pénal* : dossier spécial n° 1 du 14 nov. 2019.

would have made it possible to meet international commitments³² in full, the text invites signatory countries to make efforts towards the objective set. The Juvenile Criminal Justice Code thus brings the situation closer to the international text than it had previously been.³³ As expressed by the French Ministry of Education on the school reports of average pupils: “Efforts are being made, but we can do better...” In practice, however, it is perilous to refrain from examining the discernment of minors, especially as this question also arises for adults under the provisions of Article 122-1 of the French Penal Code.

It is therefore on the basis of an analysis of the minor’s capacity for discernment, which is presumed from the age of thirteen, that he or she can be held criminally liable. Then there is the question of society’s penal response. The age threshold of thirteen reappears, but in a different context. This time, it is the age at which a minor can be sentenced, and therefore a threshold of criminal capacity.³⁴ Although numerically identical, this threshold should not be confused with the previous one used for capacity of discernment. In fact, the age of thirteen was already set by the Ordinance of February 2, 1945, to allow a minor to be sentenced.³⁵ Detecting the presence of a minor’s free will on the basis of his or her capacity for discernment will have consequences for the social reaction³⁶ which must now be analyzed, as they also have their own specific features.

II. The Consequences of Free Will in Juvenile Offenders

How do we respond to juvenile offenders? Once they have been found guilty and therefore criminally liable, society, whose values have been flouted, must react without further deteriorating the situation. The peculiarity lies precisely in the young age of the persons concerned, which reveals a personality in the making. We must therefore be able to punish without obscuring the future of these minors. While awareness of this need is not new, it has gradually grown stronger, leading to the formulation of fundamental principles of juvenile criminal justice: the primacy of educational over repressive measures (**A**), and the reduction of criminal responsibility for juvenile offenders (**B**).

A. The Primacy of Education over Repression

Although it’s true that the law of July 22, 1912,³⁷ already recognized the

32 J. Bigot, *Le mineur en conflit avec la loi reste-t-il un enfant à protéger?* *AJ Pénal* 2019, p. 479 - Ch. Lazerges, *Cohérence et incohérences dans l’ordonnance n° 2019-950 du 11 septembre 2019 portant partie législative du code de la justice pénale des mineurs*, *prec.*

33 S. Jacopin, *art. préc.*

34 S. Jacopin, *art. préc.*

35 Art. 2 ord. n° 45-174 du 2 fév. 1945.

36 On this concept, see in part. R. Gassin, S. Cimamonti, Ph. Bonfils, *op. cit.* n° 560 et seq.

37 E. Pierre, *La revanche des juristes ou comment entraver l’application de la loi du 22 juillet 1912*,

specific nature of juvenile criminal justice by creating the juvenile court and a threshold of criminal minority set at thirteen years of age, the roots of the amplification of this need can be found in the preamble to the decree of February 2, 1945, which the report to the President of the Republic on the Juvenile Justice Code³⁸ keeps up to date. The extract is eloquent: “*There are few problems as serious as those concerning the protection of children, and among them, those relating to the fate of children brought before the courts. France is not rich enough in children for it to have the right to neglect everything that can make them healthy beings.*” Its first merit is to recognize the minor offender as being in a situation of danger, by linking child protection with the fate of children brought to justice. This postulate is concretely reflected in Article L. 421-1 of the Juvenile Justice Code, which stipulates *in fine* that referral to the authorities responsible for the administrative or judicial protection of children by the public prosecutor can be considered a sufficient response in terms of public action. The second merit of this passage is that it emphasizes the need to ensure that these children are healthy, and that every effort is made to ensure that they do not get bogged down in delinquency. When we look at punishment and, more generally, the penal response, as Durkheim did, to consider it above all as a social reprimand that strengthens the bonds of the collective conscience,³⁹ it can be accepted that the main vector for the commission of an offence is a lack of education.⁴⁰ Society’s reaction must therefore be an opportunity to reaffirm social values and the sanctity of the law, which cannot be transgressed with impunity. If punishment serves only to frighten, its effects are limited and it becomes ineffective on repeat offenders. So, by prioritizing education over repression, the social reaction makes it possible to show a form of disapproval, but above all, to provide the means to correct the behavior by transmitting new social references. A juvenile who causes problems is a juvenile who is experiencing difficulties that he or she is unable to resolve on his or her own. The commission of an offence by a minor can be a symptom of social maladjustment and, sometimes, of suffering. In such cases, it is important to choose a penal response that prioritizes what is useful for the minor’s recovery, rather than primarily punishing the seriousness of the offence. Article L. 11-2 of the French Juvenile Criminal Justice Code is very explicit on this point, stating that “*decisions taken with regard to minors are aimed at their educational and moral rehabilitation, as well as at preventing recidivism and protecting the interests of victims.*” A reading of this text certainly confirms the primacy of educational over repressive measures, but also the need to combat recidivism and to take into consideration the interests of victims. The concrete

Revue d'histoire de l'enfance "irrégulière" 2015, p. 101.

38 Report to the President of the Republic on Ordinance No. 2019-950 of September 11, 2019 on the legislative part of the juvenile criminal justice code, *JO* Sept. 13, 2019.

39 E. Durkheim, *L'éducation morale*, course given at the Sorbonne in 1902–1903, Librairie Félix Alcan, 1934.

40 S. Jacopin, *art. préc.*

expression of this emphasis on education rather than repression can be seen in our law, which prohibits coercive interim measures and penalties in general for minors under the age of thirteen. The Juvenile Criminal Justice Code, like its predecessor, the Ordinance of February 2, 1945, offers a number of original legal responses that give concrete form to the principle of the primacy of education. Admittedly, the numerous amendments to the Ordinance of February 2, 1945, had contributed to the loss of coherence in the⁴¹ systems, but the Code of Criminal Justice for Minors attempts to re-establish greater rationality. There are now two educational measures: judicial warnings and judicial educational measures⁴² which are divided into four modules,⁴³ followed by penalties. However, a number of difficulties remain, as the content of some provisional measures is very similar to what would have been pronounced following a judgment recognizing the minor's guilt.⁴⁴ The same applies to certain alternatives to prosecution.⁴⁵ How do you explain to a child, whose guilt may not yet have been established, that he or she must submit to obligations similar to those imposed on a convicted minor? How can we convince him that this is in the best interests of his education? How can we explain the survival of the content of certain educational sanctions, so decried,⁴⁶ through the obligations or prohibitions that can accompany a judicial educational measure from the age of ten?⁴⁷ The Code of Criminal Justice for Minors therefore does no more than apparently abolish educational sanctions. The latter were created in 2002⁴⁸ to impose harsher penalties on minors aged ten and over, who were therefore not yet eligible for sentencing. The list of these sanctions, although rarely applied,⁴⁹ had been progressively extended. The Act of March 14, 2011,⁵⁰ curiously added to the list of sanctions a ban on minors going to and from public places between 11 p.m. and 6 a.m. without being accompanied by a legal representative, for a maximum period of three months, renewable once. The law had succeeded in turning com-

41 Ch. Lazerges, De l'ordonnance du 2 février 1945 relative à l'enfance délinquante à l'ordonnance du 11 septembre 2019 portant partie législative du Code de la justice pénale des mineurs, *art. préc.*

42 C. Marie, La nouvelle mesure éducative judiciaire : la diversité sous l'unité, *Lexbase Pénal* : dossier spécial n° 1 du 14 nov. 2019.

43 Insertion, repair, health, and placement modules.

44 V. not. Art. L. 323-1 CJPM. Provisional judicial educational measures may be pronounced at any stage of the procedure before the sanction is pronounced.

45 Art. L. 422-1 CJPM.

46 C. Marie, *art. préc.* - Ch. Lazerges, Cohérence et incohérences dans l'ordonnance n° 2019-950 du 11 septembre 2019 portant partie législative du code de la justice pénale des mineurs, *prec.*

47 Art. L. 112-3 CJPM.

48 Law no. 2002-1138 of Sept. 9, 2002 on the orientation and programming of the justice system, *JO* Sept. 10, 2002.

49 In 2018, 2,495 educational sanctions were handed down compared with 30,875 educational measures and 25,989 sentences, *Les chiffres-clés de la justice* 2018.

50 Loi n° 2011-267 du 14 mars 2011 d'orientation et de programmation pour la performance de la sécurité intérieure, *JO* 15 mars 2011.

mon sense into a sanction. What will happen when the ban expires? The minor will then consider that he or she can return to the public highway alone during this time slot, since he or she is no longer subject to a sanction. It's hard for parents to fight a message sent by the judicial institution itself. It is indeed logical that when the time limit for which the sanction was pronounced expires, it should no longer apply. If the ridiculousness of this provision had reached its peak, we can only be very surprised to find it included in the obligations or prohibitions that can be pronounced in support of a judicial educational measure in the Code of Criminal Justice for Minors. This measure now lasts for a maximum of six months.⁵¹

It is when the numerous educational measures alone, when combined, do not seem sufficient, and taking into account the personality of the offender and the circumstances of the offence, that a sentence can be considered under a special mitigation regime due to minority.⁵²

B. Reducing Criminal Liability

The aforementioned principle of the primacy of education over repression naturally leads to the use of punishment as a last resort, accompanied by special reasons. Despite this choice, the sentence must necessarily have an educational purpose.⁵³ However, the reality and effectiveness of this objective may be questioned for certain sentences, to such an extent that the Code of Criminal Justice for Minors and, before it, the Ordinance of February 2, 1945, provide a list of sentences, security measures and modes of execution forbidden to minors⁵⁴ which are exclusively oriented towards repression and the protection of society, without any utilitarian dimension for the convicted offender. To facilitate the achievement of educational goals, legislation has progressively authorized the cumulation of sentences with one, or even several, educational measures. The Juvenile Criminal Justice Code today supports this approach, subject to certain reservations,⁵⁵ but it is not without its drawbacks. Indeed, while it is undeniable that this combination of measures encourages the convicted offender to follow the path of re-education and consolidates the educational dimension of the sentence, it can also have the effect of disrupting the reference points linked to the very nature of the penal response.⁵⁶ If the decision is made to combine sentences, what meaning is given to the educational measures that accompany them? There is a real risk that it will be

51 Art. L. 112-2, 7° CJPM.

52 Art. L. 121-5 et seq. CJPM.

53 M. Brenaut, Le droit de la peine dans l'ordonnance n°2019-950 du 11 septembre 2019 portant partie législative du Code de la justice pénale des mineurs, *Lexbase Pénal* : dossier spécial n° 1 du 14 nov. 2019.

54 Art. L. 121-1 CJPM.

55 C. Marie, *art. préc.*

56 Ph. Bonfils, Réforme de la justice pénale des mineurs : une codification dans l'urgence? Summary presentation of the new text, *prec.*

assimilated to a modality of the sentence, making the educational aspect, central though it is, hardly perceptible to the minor.⁵⁷ However, the legal regime of mitigated criminal responsibility applicable to minors, set out in the Code of Juvenile Criminal Justice, may help to distinguish between the two. The Code halves the maximum *quantum* of custodial sentences incurred by an adult and sets a ceiling of 7,500 euros for fines. Age will play an important role in its operation. The age threshold is 13, which could be confused with the threshold of presumption of discernment. This is not a threshold of criminal responsibility, but a threshold of criminal capacity.⁵⁸ From the age of 13, therefore, minors can be sentenced. Between the ages of 13 and 16, minors benefit from the legal reduction of sentence, formerly known as the “mitigating excuse of minority.” In practical terms, this means that the minor will be subject to a custodial sentence whose maximum corresponds to the *quantum* set for adults, divided by two. If the sentence is life imprisonment, the minor is liable to a maximum of 20 years’ imprisonment. Minors aged 16 and over also benefit from this favorable regime, but it is no longer automatic, as the criminal court may, by reasoned decision, decide to deny it to them. However, life imprisonment is still not incurred, and in such cases the maximum sentence is 30 years’ rigorous imprisonment. This reduction does not apply to other sentences, such as community service or probation. The criminal court thus regains its full power to individualize criminal penalties.

In the light of the above, it might be tempting to claim that the Juvenile Criminal Justice Code does little to innovate when it comes to sentencing. However, it is important to qualify this statement immediately, as the juvenile court judge can now pronounce three types of sentence in chambers, whereas the Order of February 2, 1945, limited his power to pronouncing educational measures, reserving the right to pronounce a sentence to a collegiate criminal court, the juvenile court or the juvenile assize court. This is an important change, which seems to be justified by the spirit of speed that drives the Juvenile Criminal Justice Code. The fact remains, however, that the educational dimension of the sentences that can be handed down by the juvenile judge alone, subject to special justification, is real. These include confiscation, probation and community service.

Imposing a sentence can cast a shadow over a minor’s future, which fully justifies the need for a special statement of reasons, combined with the exceptional nature of the sentence. The fact that the criminal trial⁵⁹ has been elevated to the status of a principle may also help to limit sentencing. Caution is called for, however, as the time limits imposed by the texts do not seem to be in line with the

57 Ch. Lazerges, Cohérence et incohérences dans l’ordonnance n° 2019-950 du 11 septembre 2019 portant partie législative du code de la justice pénale des mineurs, *prec.*

58 Cf. *above.*

59 N. Beddiar, La césure du procès pénal des mineurs, *AJ Pénal* 2019, p. 483.

concrete realities⁶⁰ and the meagre resources available to juvenile criminal justice⁶¹ which, combined with the numerous exceptions provided for the application of this system, supposedly based on principle, risks compromising the educational effectiveness of its objective. Time will tell. Successful education is certainly a long and winding road, strewn with pitfalls, but it certainly deserves an investment commensurate with its ambition and the stakes it represents.

60 Ch. Lazerges, De l'ordonnance du 2 février 1945 relative à l'enfance délinquante à l'ordonnance du 11 septembre 2019 portant partie législative du Code de la justice pénale des mineurs, *prec.*

61 C. Delanoë Daoud, M. Duverney Pret, I. Roth, "une justice des mineurs plus réactive pour une réponse éducative plus efficace," *AJ Pénal 2019*, p. 491 - C. Marie, *art. préc.*

Male Police Officers' Attitude towards Their Female Counterparts among Bangalore City Police

Dr. Bindya Yohannan

Family Counsellor, Parihar Vanitha Sahaya Vani, Bangalore

Dr. Gayathri Ranjith

Assistant Professor, Anugraha Institute of Social Sciences, Dindigul

ABSTRACT

The dynamics within police forces around the world are shaped by a complex interplay of professional responsibilities, societal expectations, and interpersonal relationships. In recent years, there has been a growing emphasis on understanding and improving gender relations within these forces to foster a more inclusive and effective working environment. This study delves into the perceptions, attitudes, and behaviors of male police officers towards their female colleagues within the Bangalore City Police Department. Bangalore, a bustling metropolis known for its progressive outlook and technological advancements, offers a unique setting for examining gender dynamics within law enforcement. Despite the city's modern facade, traditional gender roles and biases still influence the workplace environment. This research seeks to uncover whether these biases persist among male police officers and how they impact the professional experiences of female officers. This study aims to investigate the attitudes of male police officers towards their female counterparts in the police force. The Attitudes Toward Women Scale (AWS) was developed by Janet T. Spence and Robert Helmreich in the early 1970s. It is a widely used psychological assessment tool designed to measure attitudes toward the roles and rights of women in society. The findings of this study aim to provide a comprehensive understanding of the current state of gender relations within the Bangalore City Police. The insights gained from this research will not only highlight areas needing improvement but also suggest strategies to promote a more equitable and supportive workplace for all officers, irrespective of gender.

Keywords: attitude, male police officers, gender perceptions

Introduction

The role of law enforcement is pivotal in maintaining societal order and ensuring justice. Within this crucial sector, the attitudes and interactions among officers significantly influence the effectiveness and harmony of the police force. This study, “Male Police Officers’ Attitude Towards Their Female Counterparts among Bangalore City Police,” seeks to explore the perspectives and behaviors of male police officers towards their female colleagues within the Bangalore City Police Department.

Bangalore, a city renowned for its technological advancements and cosmopolitan nature, presents a unique backdrop for examining gender dynamics in the workplace. Despite the city’s progressive image, underlying traditional gender biases may persist, affecting the professional environment within the police force. Understanding these dynamics is essential for fostering a more inclusive and supportive workplace.

This research aims to investigate various facets of gender relations within the Bangalore City Police, including workplace interactions, perceptions of competence and capability, career advancement opportunities, and the overall work climate. By analyzing these aspects, the study seeks to identify any prevailing biases and their impact on female officers’ professional experiences and growth.

In recent years, there has been a significant push towards gender equality and the inclusion of women in all professional spheres, including traditionally male-dominated fields such as policing. However, the integration of female officers into the police force can be met with resistance, stemming from deeply ingrained societal and cultural norms. This study seeks to understand how male officers perceive their female counterparts, the challenges faced by female officers, and the impact of these perceptions on the overall functioning and morale of the police force.

Understanding these attitudes is crucial for developing strategies to improve gender relations within the police force. The study’s findings will provide valuable insights into the current state of gender dynamics and highlight areas where interventions may be needed to foster a more inclusive and supportive work environment. By promoting gender equality and mutual respect, the Bangalore City Police can enhance its effectiveness and better serve the community. Ultimately, this research aims to contribute to the broader conversation on gender equality in law enforcement, offering lessons and recommendations that can be applied not only in Bangalore but also in police departments across India and globally.

Review of Literature

Cordner and Cordner (2011) in “Stuck on a Plateau? Obstacles to the Recruitment, Selection, and Retention of Women Police” discuss how gender bias affects professional relationships within the police force. They highlight that male officers’ attitudes towards female officers can create a hostile work environment, making it difficult for women to establish themselves as equals. Such biases not only hinder female officers’ performance but also affect team cohesion and overall departmental efficiency.

The perception of competence and the opportunities for career advancement are critical issues addressed in various studies. Lonsway et al. (2002) in “Hiring & Retaining More Women: The Advantages to Law Enforcement Agencies” argue that despite equal qualifications, female officers often face scepticism regarding their capabilities. This bias is reflected in promotional decisions, where male officers are more likely to be favoured over their equally or more qualified female counterparts.

Research by Silvestri (2013) in “Women in Charge: Policing, Gender and Leadership” suggests several strategies for improving gender relations within police departments. These include implementing gender sensitivity training, promoting mentorship programs, and establishing clear policies against gender discrimination. Such measures can help in creating a more inclusive environment where female officers are valued for their contributions and have equal opportunities for advancement.

Comparative studies across different regions and police departments provide additional insights. In their study, Brown and Heidensohn (2000) in “Gender and Policing: Comparative Perspectives” compare the experiences of female officers in different countries, highlighting how cultural and institutional contexts influence gender dynamics. They find that in departments where proactive measures are taken to address gender bias, female officers report higher job satisfaction and better integration with their male colleagues.

While much of the existing literature focuses on Western contexts, studies specific to India, such as Ranjana Kumari’s (2011) “Status of Women Police in India,” provide a localized perspective. Kumari’s work highlights the unique challenges faced by female officers in India, including societal expectations and institutional barriers. These studies underscore the importance of understanding cultural nuances when addressing gender dynamics in the Bangalore City Police.

Objectives

The aim of this study is to measure the attitude of Male police officers towards their female counter parts among Bangalore city police.

1. To understand the Socio Demographic profile of the police officers (both male & female) working in Bangalore city.
2. To Determine the general attitudes of male police officers towards female officers, including perceptions of their capabilities, roles, and contributions to the police force.
3. To Analyze the factors that influence male police officers' attitudes, such as age, rank, years of service, education level etc.
4. To suggest strategies and interventions to promote gender equality and improve the professional environment for female police officers.

Methodology and Procedure

Research Design

On the demand of the study, descriptive research design methodology has been utilized for investigating and collecting 150 data so as to pursue the relationship between the Key variable and the Socio-Demographic data i.e., gender, age, education, experience, rank. It clearly describes the scenario of attitude of male police officers towards their female counter parts.

Hypotheses

Hypothesis No.1: Attitude towards women among the respondents differ with regard to the training they have attended with women colleagues.

Hypothesis No.2: Attitude towards women among the respondents among the respondents is influenced by the designation of the respondents.

Hypothesis No.3: Attitude towards women among the respondents differ with regard to their age.

Hypothesis No.4: Attitude towards women among the respondents differ with regard to the self esteem of the respondents.

Methodology

Survey: Conduct a comprehensive survey targeting male police officers at various ranks and departments to gather quantitative data on their attitudes towards female officers.

Data Analysis: Employ statistical methods to analyse the survey data, identifying trends and correlations between attitudes and demographic factors. Use thematic analysis for the qualitative data from interviews.

Significance of the Study

Understanding the attitudes of male police officers towards female officers is crucial for several reasons: Policy development, implementation of policies aimed at promoting gender equality within police forces, improved working conditions by identifying and addressing negative attitudes can lead to a more inclusive and supportive work environment, enhancing job satisfaction and retention rates among female officers. It can enhance the positive attitudes and improved gender relations can foster better teamwork and communication, ultimately leading to more effective law enforcement operations.

Sampling

The study was conducted among Bangalore City Police covering the population of 150 police officers including DCP, Inspector, Sub Inspector, etc. The respondents were briefed about the nature of the study. It is explained that their participation was entirely voluntary and they could stop filling up questionnaires at any point without assigning any reasons. Informed consent was obtained from the respondents who have expressed their willingness for the study. Simple random sampling method was applied to carry out the data collection.

Tool for Data Collection

A socio-demographic information sheet was prepared by the author to collect background information of the students like age, gender, domicile, rank, experience, did they work with female staff, etc. and attitude towards women scale.

Statistical Technique Used

- ✓ Independent Sample T test was used to compare mean difference between the variables
- ✓ One-way Anova was used to find out the mean difference among the age of the respondents with regard to the Key variable.

Major Findings

Table 1. Socio-demographic Profile of Police officers

S.No	Socio-demographic Profile	No. of Respondents	Percentage
1	Age		
	23 to 35 years	79	52.7
	35 to 47 years	46	30.7
	Above 47 years	25	16.7

	Total	150	100%
2.	Rank of the Police Officers		
	Deputy Commissioner	5	3.3
	Assistant Commissioner	4	2.7
	Inspector	32	21.3
	Sub Inspector	109	72.7
	Total	150	100%
3.	Educational Qualification		
	Below UG	19	12.7
	UG	50	33.3
	Technical Qualification	7	4.7
	PG	60	40%
	Above PG	13	8.7
	Total	150	100%
4.	Domicile		
	Rural	77	51.3
	Urban	73	48.7
	Total	150	100%
5.	Years of Service		
	Below 10 years	71	47.3
	10 to 20 years	17	11.3
	20 to 30 years	30	20
	Above 30 years	32	21.3
	Total	150	100%
6.	Monthly Income		
	Below 40 K	20	13.3
	40 to 60 k	50	33.3
	60 to 80k	7	4.7
	80k to 1 lakh	59	39.3
	Above 1 Lakh	14	9.3
	Total	150	100%
	Type of Family		
7	Nuclear	77	51.3
	Joint	73	48.7
	Total	150	100%

The above table describes the data presents a diverse demographic profile of the police officers in terms of age, rank, education, domicile, years of service, income, and family type. This diversity could influence various aspects of their professional performance and personal lives. The majority of respondents (52.7%) are aged between 23 and 35 years. This indicates that the police force has a relatively young workforce, with more than half under 35 years of age. A significant

majority, 72.7%, are Sub Inspectors. The largest group, 40%, has a postgraduate (PG) degree. 8.7% have qualifications above PG, and 4.7% hold technical qualifications. This reflects a well-educated workforce, with a significant proportion having advanced degrees.

Respondents are almost evenly split between rural (51.3%) and urban (48.7%) domiciles. This shows a balanced representation from different residential backgrounds. Nearly half of the respondents (47.3%) have less than 10 years of service. This indicates a mix of both experienced and relatively new officers in the force. The majority (39.3%) earn between 80k to 1 lakh per month. Respondents are almost equally divided between nuclear (51.3%) and joint (48.7%) families. This reflects diverse family structures among the police officers.

Table 2. Trained & Patrolled with Female Police officers

S.No	Trained & Patrolled with Female police officers	No. of Respondents	Percentage
1	Have Trained with Female Police officers		
	Yes	101	67.3
	NO	49	32.7
	Total	150	100%
2.	Have Patrolled with Female Police officers		
	Yes	101	67.3
	NO	49	32.7
	Total	150	100%

The table the respondents' experiences with training and patrolling alongside female police officers. A significant majority (67.3%) of respondents have trained with female police officers. This indicates that most officers have had the opportunity to collaborate with female colleagues during their training period. Similarly, 67.3% of respondents have patrolled with female police officers. This suggests that a significant portion of the police force has engaged in on-the-job duties alongside female colleagues. Overall, the data reveals a consistent trend where more than two-thirds of the police officers have both trained and patrolled with female officers. This reflects a relatively integrated environment in terms of gender collaboration within the police force. The remaining one-third who have not had such experiences might indicate areas where integration could be improved.

Table 3. Living & Spending Time with Family

S.No	Living & Spending Time with Family	No. of Respondents	Percentage
1	Living with Family		
	Yes	101	67.3

	NO	49	32.7
	Total	150	100%
2.	Able to spend time with family		
	Yes	84	56
	NO	66	44
	Total	150	100%
3	Like your Job		
	Yes	142	94.7
	NO	8	5.3
	Total	150	100%
4.	Rate yourself		
	Low Self Esteem	24	16
	High Self Esteem	126	84
	Total	150	100%

The table summarizes the respondents’ living arrangements, ability to spend time with family, job satisfaction, and self-esteem levels. A majority (67.3%) of respondents live with their family. This indicates that most officers have the opportunity for regular family interaction, which can be crucial for personal well-being. More than half (56%) of the respondents can spend time with their family. This suggests a significant portion of officers may face challenges in balancing work and family life. An overwhelming majority (94.7%) of respondents like their job. This high level of job satisfaction indicates that most officers are content with their professional roles. A large majority (84%) of respondents rate themselves as having high self-esteem. This suggests that most officers feel confident and positive about themselves. Overall, the data indicates that while most officers live with their families and like their jobs, a notable portion struggles with spending adequate time with family. Additionally, a strong sense of self-esteem is prevalent among the majority of respondents.

Table 4. Attitude towards Woman Police Officers

S.No	Attitude Towards women	No. of Respondents	Percentage
1	Conservative Attitude	59	39.3
2	Towards Egalitarian	38	25.3
3	Highly Liberal	53	35.3
	Total	150	100%

The table summarizes the respondents’ attitudes towards women, categorized into conservative, egalitarian, and highly liberal perspectives. 39.3% of re-

spondents have a conservative attitude towards women. 25.3% of the respondents lean towards an egalitarian attitude. 35.3% of respondents have a highly liberal attitude towards women. This diversity may influence workplace dynamics and the integration of gender equality initiatives within the police force.

Hypothesis No. 1: Attitude towards women among the respondents differ with regard to the training they have attended with women colleagues.

To test this Hypothesis independent sample t test has been applied and Table 5 indicates the significant statistical difference in the level of attitude towards women with regard to the training programmes attended with women variable.

Table 5. Attitude towards Women & Training Attended with Women Variable

	Trained with female	N	Mean	Std. Deviation
Attitude	Yes	101	2.08	.886
	No	49	1.90	.854

Independent Sample t test, 't' Value is 0.296 & it is significant at the 0.01 level (2-tailed).

It is very clear from the above table that the attitude level of the male police officers who have received the opportunity of attending training programmes with women are egalitarian and towards women empowerment (2.08 as mean), when compared to individuals who haven't received training with women police personnel. This observed differences are statistically significant as the independent sample 't' test values are significant at 99% level of significance. Attitude towards women among the respondents differ with regard to the training they have attended with women colleagues. It can also be stated that the attitude level is more egalitarian when they get opportunity to work and train with women colleagues.

Hypothesis No. 2: Attitude towards women among the respondents among the respondents is influenced by the designation of the respondents.

To test this Hypothesis Chi Square test is applied and the table 6 indicates that there is a significant relationship with regard to the designation of the respondents and the Key variables: Attitude towards women.

Table 6. Cross Tabulation between Designation of the Respondents & Their Attitude towards Women

Rank		Attitude			Total
		Conservative Attitude	Towards Egalitarian	Highly Liberal	
	ACP	1	2	2	5
		.7%	1.3%	1.3%	3.3%
	DCP	2	2	0	4
		1.3%	1.3%	.0%	2.7%
	Inspector	11	2	19	32
		7.3%	1.3%	12.7%	21.3%
	SubInspector	45	32	32	109
		30.0%	21.3%	21.3%	72.7%
Total		59	38	53	150
		39.3%	25.3%	35.3%	100.0%

Test applied	Value	Significance level
Chi Square	15.359 at 6 degrees of Freedom	Significant

It is very clear from the above table that the attitude level of the male police officers has an association with the variable to make an attitude of egalitarian and towards women empowerment. This observed frequencies are statistically significant as the Chi square test values, i.e, 15.359 and significant at 99% level of significance at 6 degrees of freedom. It can also be stated that the attitude level is more egalitarian among sub inspectors. This shows that as the police personnel in the ground level of designation they are allowed to involved in getting training & patrolled with women personnel for official purpose, this will enrich their egalitarian attitude.

Hypothesis No. 3: Attitude towards women among the respondents differ with regard to their age.

To test this Hypothesis one way ANOVA test has been applied and Table 7 indicates the significant statistical difference in the level of attitude towards women with regard to the age variable.

Table 7. Attitude towards Women & Age Variable

	N	Mean	Std. Deviation
23 to 35 years	79	1.87	.868
35 to 47 years	46	2.17	.825
Above 47 years	25	1.84	.898
Total	150	1.96	.866

Test applied	Value	Significance level
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ANOVA	2.067	Significant
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Anova test 2.067 is significant at the 0.01 level (2-tailed).

It is very clear from the test results that attitude of the respondents towards women differs as per their age category. This observed differences show statistical significance & difference and as the ANOVA test values are significant at 99% level of significance. It can also be interpreted that personnel who are in the age category of 35 to 47 years, i.e., young adults, they have more egalitarian attitude.

Hypothesis No. 4: Attitude towards women among the respondents differ with regard to the self-esteem of the respondents.

To test this Hypothesis independent sample t test has been applied and Table.No.5 indicates the significant statistical difference in the level of attitude towards women with regard to the training programmes attended with women variable.

Table 8. Attitude towards Women & Self-esteem Variable

	Rate yourself	N	Mean	Std. Deviation
Attitude	Low Self Esteem	24	1.94	.830
	High Self Esteem	126	2.08	.874

Independent Sample t test, 't' Value is 0.296 & it is significant at the 0.01 level (2-tailed).

It is very clear from the above table that the attitude level of the male police officers who have high self-esteem possess egalitarian and towards women empowerment attitude (2.08 as mean), when compared to individuals who have low level of self-esteem. This observed differences are statistically significant as the independent sample 't' test values are significant at 99% level of significance. Attitude towards women among the respondents differ with regard to the self-esteem level of the police officers. It can also be stated that the attitude level is more egalitarian when they have good level of self-esteem.

Discussion

The key findings of the study are enumerated as below:

1. **Young Workforce:** The respondents are relatively young, predominantly holding the rank of Sub Inspectors.
2. **Educational Background:** A majority possess a Post Graduate Degree.
3. **Experience:** The police force comprises a mix of both experienced and relatively new officers.

4. **Family Structures:** There is a diverse range of family structures among the officers.
5. **Training and Patrolling with Female Officers:** A significant portion of the force has experience in training and patrolling alongside female colleagues, suggesting integration and collaboration in on-the-job duties.
6. **Family Interaction:** Most officers have regular opportunities for family interaction, which is crucial for personal well-being. Despite this, a notable portion struggles with spending adequate time with their families.
7. **Job Satisfaction:** Most officers are content with their professional roles and appreciate the balance of living with their families and enjoying their jobs.
8. **Attitudes:** The respondents largely exhibit egalitarian attitudes and have moved beyond conservative ideas.

The study indicates that attitudes towards women among male police officers are influenced by various factors, including training programs attended alongside female officers, their rank, age, and self-esteem levels. Ground-level staff, in particular, benefit from training with female officers, which enhances their egalitarian attitudes and openness to women empowerment while reducing conservative biases. This interaction and training with female colleagues are pivotal in fostering progressive attitudes and preventing conservative ideologies.

In conclusion, the diverse demographic profile and experiences of the police officers contribute to a more inclusive and progressive work environment. Training and interaction with female officers play a significant role in shaping egalitarian attitudes, enhancing self-esteem, and promoting women empowerment within the police force.

Conclusion

In conclusion, the study reveals that the police force's diverse demographic profile, encompassing various aspects such as age, rank, education, domicile, years of service, income, and family type, significantly impacts their professional and personal lives. The findings highlight a relatively young and educated workforce, predominantly in the rank of Sub Inspectors, with a mix of experienced and new officers. The officers' experiences in training and patrolling alongside female colleagues contribute to their egalitarian attitudes and openness to women empowerment, indicating progress beyond conservative ideas.

Despite most officers expressing satisfaction with their professional roles and the balance of family life, there remains a challenge in achieving adequate family time for some. The study underscores the importance of regular family interaction for personal well-being and highlights the positive influence of integrated training programs with female officers on fostering progressive attitudes among male officers.

Overall, the diverse and inclusive environment within the police force, supported by collaborative training experiences, promotes a culture of equality and empowerment, contributing to a more effective and harmonious professional setting.

Recommendations

Based on the findings of the study, several suggestions can be made to further enhance the professional and personal well-being of police officers, and to promote a more inclusive and supportive work environment:

1. **Enhanced Training Programs:** Continue and expand integrated training programs that include both male and female officers. These programs have proven effective in fostering egalitarian attitudes and should be a standard part of professional development.
2. **Work-Life Balance Initiatives:** Develop and implement policies that support work-life balance, such as flexible scheduling, mental health support, and family-friendly workplace initiatives. Ensuring officers have adequate time to spend with their families will enhance their overall well-being and job satisfaction.
3. **Mentorship and Support Networks:** Establish mentorship programs and support networks within the police force, pairing experienced officers with newer recruits. These programs can provide guidance, support, and help in adjusting to the demands of the job while promoting a culture of camaraderie and mutual respect.
4. **Regular Attitude Assessments:** Conduct regular assessments to gauge officers' attitudes towards gender equality and inclusivity. Use the results to tailor training and development programs, ensuring they address any areas of

concern and continue to promote progressive attitudes.

5. **Encouraging Higher Education:** Support and incentivize officers to pursue further education and professional development. Higher education levels are associated with more progressive attitudes, and providing opportunities for advanced learning can benefit both the officers and the organization.
6. **Focus on Mental Health:** Prioritize mental health resources and programs to help officers manage the stresses of their job. This includes access to counseling, stress management workshops, and initiatives that promote overall mental well-being.
7. **Promoting Open Dialogue:** Create platforms for open dialogue where officers can share their experiences, challenges, and suggestions. This can help in identifying issues early and developing solutions collaboratively, fostering a more inclusive and supportive environment.
8. **Recognition and Reward Systems:** Implement recognition and reward systems that acknowledge officers' contributions to fostering an inclusive and progressive work environment. Celebrating positive behaviors and achievements can motivate others to follow suit.

By implementing these suggestions, the police force can build on its existing strengths and address areas that need improvement, ultimately leading to a more effective, inclusive, and supportive workplace.

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Corruption and Organized Crime: Some Lessons from the Italian Concept of “External Conspiracy in Mafia Association”

Clotilde Champeyrache

It is often said that there can be no organized crime and trafficking without corruption—and that is true. At the same time, all too often, especially among economists, the vision of corruption is marginal and caricatured: corruption is usually thought to be outside the logic of the market and therefore generated by the public sector. Moreover, many economists think of the world in a rather binary way: the illegal on one side, the legal on the other, with a boundary thought to be watertight. There is “them,” the bad guys, and “us,” the good guys. In this logic, it is hard to understand what corruption really means in relation to organized crime. It is even more complicated to fight it, since it fundamentally does not “fit” into the model.

My key to enter the subject of the interrelations between organized crime and corruption will be the law and, more specifically, an Italian concept that seems to me fundamental for a more global comprehension of what is really at stake. This concept is labelled “external conspiracy in Mafia association” (*concorso esterno in associazione mafiosa*). Before presenting this offence, it is necessary to briefly review the offence of Mafia association under Italian law. This offence has been defined in article 416 bis of the Penal Code since 1982. It supplements the offence of criminal association. The definition sets out the characteristics needed to identify a mafia precisely. Very briefly, these are:

- The strength of the associative link, which produces subjection and omerta. In concrete terms, we are dealing with a strong form of criminal organization, which has a qualitative impact on the type of corruption used.
- The fact of committing crimes with the specificity that none is specified in particular. A mafia does not identify itself with any particular type of trafficking, especially drug trafficking.
- Above all, and this is crucial for the topic of corruption and organized crime, a mafia always interacts with the legal sphere. This applies to the economic sphere, with the capture of tenders and therefore of public money. It also concerns the political sphere, with the conditioning of elections. This is what the Italians call the “vote exchange” (*voto di scambio*): control over packets of votes is exchanged with the corrupt politician. Once elected, the politician returns the favor by rigging tenders, opportunistically changing town-planning

schemes, granting concessions, authorizing the construction of shopping malls, arbitrarily allocating social benefits, and so on.

Mafias: The Forgotten Link between Organized Crime and the Legal Sphere

As soon as we define what a mafia is, the question of corruption arises. The exchange vote is highly representative of the qualitative rise of the corruptive pact as soon as the criminal organization relies on a strong associative link.

In this configuration, the corruptive link is not person-to-person and therefore must not be renewed for each operation. With the exchange vote, the politician links his fate to that of the criminal organization in a give-and-take logic. The pact is not so much with one specific Mafia member as with the Mafia organization as a whole. There is a logic of conditioning and reciprocity.

But Italian judges have gone further in the fight against this connection between organized crime and society. They have done so through the jurisprudential construction of the offence of external conspiracy in a mafia association in order to take into account the wide range of corruptive links between mafias and the legal sphere.

From a historical point of view, organized crime is surprisingly a very recent term. It first appeared in the United States at the end of the 19th century. More precisely, in 1896, in the Annual Report of the *New York Society for the Prevention of Crime*. This document refers in particular to illegal gambling and prostitution. The striking point is that it emphasizes that these activities take place under the protection of public officials. Afterwards, in the 20s and 30s, Prohibition was to shape the way the United States thought about crime. The first efforts to define organized crime were linked to racketeering, narcotics, prohibited alcohol, illegal gambling and false papers. But each time, the connection with the upperworld was emphasized in the descriptions made of these illegal activities.

This connection between the legal and the illegal was gradually lost, even though it could have been a powerful tool on which to build a crime containment policy. From the 50s onwards, the United States focused on the Italian-American mafia. The alien conspiracy thesis took over. However, logically, if the enemy was designated as external, the internal connections had to be ignored ... From then on, the connections between the upperworld and the underworld faded into the background or were even denied. As a result, the fight against corruption suffered. So did the ability to understand what corruption is. Yet the way in which organized crime is defined determines the way we decide to fight it.

The experience gathered by Italian judges during anti-mafia trials puts the

issue of the connections between the upper- and under-worlds, that is corruption back at the heart of their case. Indeed, Italian judges have understood at least three things during anti-Mafia trials:

- that they were up against not only mafiosi but also non-affiliates;
- that these non-affiliates were sometimes decisive in the Mafia's expansion;
- finally, that this veritable grey zone was clearly expanding.

In response to this challenge, Italian judges have developed a new offence called “external conspiracy in a mafia association.” In concrete terms, who is targeted? According to a decision of an Italian Court of Cassation, “On the subject of mafia-type association, a person who, although not permanently included in the organizational structure of the association, nevertheless makes a concrete, specific, conscious and voluntary contribution, of a material or moral nature, assumes the role of an “external” current, as long as this has an actual causal relevance in the preservation or strengthening of the operational capabilities of the association” (Court of Cassation, Sec. 6, No. 8674 of 24/01/2014, Imbalsamo, Rv. 258807). Concretely, it means that this offence is designed to punish more severely those economic agents who are **not affiliated** to the criminal organization, but who **knowingly** provide it with **active and voluntary assistance**. Specifically targeted are company directors, judges, accountants, notaries and other professionals who enter into a relationship of complicity with the mafia because the latter enables them to increase their profits and reduce their costs.

For instance, in 2021, the police operation labelled Rinascita Scott was held in Calabria. It resulted in a maxi-trial that lasted three years with 355 defendants. Among the accused are obviously mafia members, but also a wide variety of “accomplices” suspected of having contributed to the mafia activities without actually being part of the criminal association. The variety of profiles of those involved shows that many preconceived ideas about corruption need to be revised. It also provides an insight into the corruptive and facilitating dimension of organized crime.

The Urgent Need to Revise Preconceived Ideas about Corruption

The implementation of the offence of external conspiracy in a mafia association allows us to take a new look at what corruption really is (Champeyrache, 2025). In particular, the use of this offence shows that

- corruption can be private as well as public,
- it can be voluntarily search for by agents from the legal sphere,
- it is often justified by personal interest and by a neglect for the common good,

- and it is deeply endemic.

All too often, corruption is associated with the public sector. When economists take corruption into account, it is indeed almost always in connection with the public sphere. The belief in the superiority of the market explains this point of view. Corruption is analyzed in terms of unproductive expenditure: the corrupting agent mobilizes resources (e.g., bribes) in order to obtain an undue advantage, to capture a rent. These resources could have been mobilized more efficiently by being invested in the productive private sphere. In this sense, corruption is supposed to be incompatible with the market, which is believed to be driven exclusively by the quest for efficiency. The source of corruption must therefore be found outside the market, in the state and the public sphere.

The liberal logic currently dominant in economics sees public intervention as a disruptive element in self-regulating, naturally efficient markets. For Gary Becker, winner of the 1992 Nobel Prize in Economics, “if we abolish government, we abolish corruption” (Business Week, 1998, pp. 565-566). Conversely, the market is necessarily virtuous.

The implementation of the external conspiracy in a mafia association puts an end to this arbitrary association between the public sphere and the origin of corruption. Of course, the people charged include politicians, members of law enforcement agencies, customs officers, municipal staff and administrative officials. But they also include lawyers, accountants, tax specialists, doctors and entrepreneurs. Corruption between private agents is a reality that must be taken into account.

All too often too, corruption in the private sector is seen as a victim relationship: the private entrepreneur is forced to submit to corruption.¹ If he does so, it is because others are corrupt, and he must do the same to resist competition. These situations do exist, of course, but they do not describe all corruptive phenomena. External conspiracy in a mafia association underlines the voluntary dimension of association with organized crime on the part of a private actor in the legal sphere. Moreover, this relationship of sought-after complicity is often seen not as a way of re-establishing competition distorted by pre-existing and wide-spread corruption but, on the contrary, as a way of creating a competitive advantage to the detriment of those who refuse the mafia pact.

There is another lesson to be learned from the external conspiracy in a mafia association. This lesson is problematic for the medium and long term. It has to do with the motivations of people entering into a relationship of complicity with the criminal organization. It also reflects the importance of economic reasoning and values in our social organizations, and the progressive obliteration of the legal

¹ A view explicitly rejected by Clinard's book on corporate corruption depicted as “an abuse of power” (Clinard, 1990).

foundations of our economic systems. When defendants are called upon to justify their actions, the argument they invoke is traditionally that of self-interest and the quest for profit. The option chosen—that of complicity with criminal groups—is thought to be the one that “pays the most.” It’s a purely accounting, short-term cost-benefit calculation. It takes no account of the general interest or of medium- and long-term consequences. This is at the heart of the problem of corruption. At least corruption in its original, general sense. Corruption—differently from organized crime—is an ancient term. It was already mentioned in ancient Greece. In those days, corruption meant any abuse of a position of power to the detriment of the common good. Ancient Greece therefore assumed that there could be an antagonism between a personal, private interest and the common good, that of society. Liberal thinking tends to deny this conflict. The idea is that the sum of individual interests produces the general good. It is illustrated by the well-known image of the “invisible hand” described by Adam Smith: if each individual is free to maximize his or her profit, then the nation’s wealth will be maximized. However, there is no guarantee that interests will converge, and the common good cannot be defined solely in terms of maximizing wealth. Particularly if we move beyond the immediate situation in order to take account of the long-term effects of some activities. Environmental crime is a perfect illustration of this configuration.

Finally, the use of the external conspiracy in a mafia association highlights the endemic nature of corruption, even its trivialization. Corruption is not external to economic activity; relations between private actors are not free from corruption, in the sense that potentially anyone is likely to give in to the siren calls of corruption. This endogenous character is accentuated by an economic discourse that values private enrichment while disconnecting it from legal and moral dimensions. Corruption as practiced and highlighted in particular through external conspiracy in a mafia association shows that it is not a defect brought about by the public sector to the detriment of the smooth running of the market. Corruption also accompanies the market and is often seen as an economic advantage, an additional opportunity for profit. It is therefore essential to understand the corrupt relationships established by organized crime with various professions.

Many actors in the legal economy who accept corruption often do so in the name of a short-term economic calculation. This calculation is particularly short-sighted, and all the more so when the criminal organization behind it is powerful. Frequently, entry into the corrupt cycle is experienced as a “here and now” opportunity, to be exploited quickly for equally rapid gain. In the legal sphere, this logic is referred to as a “hit and run” operation: you exploit a new profit opportunity, then pull out as soon as the potential gains dwindle. The difference is that entering into a relationship of complicity with a criminal organization does not allow for unilateral withdrawal from the game. Economic actors do not always understand this spider’s web logic. Those who accept once will be asked again. This

also explains why, in some cases, criminals use a mixture of greed and violence to make non-affiliates cooperate with them.

The stronger and more enduring the criminal organization, the more enduring the corrupt relationship. This is typically the case with mafia-type criminal organizations. This is a relationship where it becomes difficult to distinguish between the corrupt and the corrupted because both parties benefit from the corrupt relationship. Corruption is not associated anymore to the unproductive use of resources. In this case, we reach the extreme configuration where corruption produces forms of criminal allegiance among non-affiliates.

In such a context, criminal affiliation is no longer the only way to benefit from the criminal organization. Even non-affiliates can see the complacent relationship with criminals as an opportunity. This is because mafias (and some other powerful criminal organizations) are able to segment the population within the legal economy. This works because these criminal groups already have a strong hold on the legal economy, they have infiltrated a number of activities.

Let's take a very simple example. One of the mafias' favorite targets when infiltrating the legal economy is the building industry. It is a sector that allows them to employ large numbers of often unskilled workers, which strengthens the territorial control exercised by crime. Moreover, it is a sector in which public money can be collected and local politicians brought into contact. A first level of corruption is put in place via the aforementioned "vote exchange." But it can go much further. By targeting certain stages in the production process, the mafia can succeed in conditioning the entire sector. A second level of corruption is then reached.

Italian investigations have highlighted the targeting of concrete production and sale, as well as the supply of earthmoving equipment. By choosing to invest in these key activities, mafiosi can bring a construction site to a standstill if they so wish. All they have to do is fail to deliver the materials or fail to deliver them on time. Officially, they can claim a technical problem beyond their control. In reality, this enables them to impose their conditions as a prerequisite for resuming activity. These conditions concern the choice of suppliers, the placement of labor, the obtainment of subcontracts, etc. Eventually, this power relationship² is integrated and accepted by part of the contractors. It leads to the segmentation stage: those who accept the mafia's conditioning will gain access to economic resources; those who refuse will lose markets. The mafia's ability to segment the population, i.e., to discriminate in terms of access to economic resources and opportunities, facilitates the transition from subjugation to desired complicity. Economic actors therefore choose to enter into complicit relationships with organized crime. They may even be the ones seeking to establish relations with criminals.

2 For more about the relationship between positions of power and corruption, see the analysis of John R. Commons on the subject in Broda (2016).

At least two major implications follow. The first is that the relationship between the criminal organization and its accomplices in the legal sphere is, in this case, fundamentally a pacified one. Violence is no longer necessary to coerce. It means that we lose one of the indicators traditionally associated with organized crime: the violence that presumably accompanies crime. We end up with a criminal infiltration of the legal economy that goes unreported and unnoticed. Sometimes, in the absence of visible violence, it is even denied. The second implication concerns the erosion of the belief that there are legal foundations to our economies. Mainstream economic theory tends to say that if entrepreneurs agree to pay bribes (to corrupt officials) it is to re-establish a lost competitive advantage. If they did not, they would be excluded from the market. It is the victim mentality mentioned earlier. In the case of voluntary complicity, the dynamic is reversed: entrepreneurs will themselves enter into contact with the mafia in order to obtain contracts, sometimes even creating grey schemes and grey markets. As a consequence, the boundary between what is legal and what is illegal becomes increasingly fragile. Breaking the law becomes an option like any other.

Insights into the Corruptive and Facilitating Dimension of Organized Crime

There are various ways in which corruption facilitates organized crime. Some aspects are well known. Others are frequently underestimated and therefore merit further development.

The kind of corruption most traditionally associated with criminal organizations is corruption necessary to the operation of illegal markets. Corruption thus accompanies trafficking in drugs, weapons, human beings, protected species of flora and fauna, etc. Ultimately, especially in Europe, the port issue has been many times in the news. The massive influx of illegal goods—and cocaine in particular—can be explained by the sheer size of port infrastructures and the tremendous volume of containers in circulation. It is easy to conceal prohibited products in the mass of circulating goods. However, concealment alone is not enough. Corruption also facilitates these flows of illegal goods. This is where some professions are particularly at risk: dockworkers, of course, but also customs officers, crane operators, cargo handlers, and other personnel with access to information on port activity.

The reason why these professions are specifically targeted by criminal organizations is obvious. But corruption can encompass other behaviors that endanger the common good. It is the case with professions such as service providers who may claim to be acting in good faith, but who offer services that may well be legal, but are clearly attractive to organized crime. In the legal economy, there are real “facilitators” of crime.

Generally speaking, it should be noted that, empirically, the configuration of market economies bears little resemblance to mainstream economic theory. In the theoretical world, supply and demand meet directly in a competitive market. What we observe in real life is a growing reliance on intermediation, which is generally unregulated or insufficiently regulated. This intermediation can represent a weakness in the ability of economies to resist criminal influence. It can also be an opportunity for a grey market to develop. The term “grey market” refers to a hybrid form in which legal channels are used for illegal purposes by exploiting legal loopholes or circumventing legal obligations, sometimes with the backing of government officials. In this way, for instance, the lack of regulation of the arms broker profession enables arms trafficking to be grafted onto the arms trade. An insufficiently regulated gaming and betting sector allows for money-laundering operations. Intermediation opens the way for a transaction that avoids compromising buyer and seller.

Financial intermediation also creates facilitation spaces for the criminal economy at a minimum, by offering layers of interactions that contribute to the opacification of money circulation circuits. In addition to increasing opaqueness, intermediation also dilutes responsibilities, until the courts can rule on the criminal liability of the various parties involved. The international expansion of banking activities in a context of cost-cutting processes has encouraged the use of correspondent banks. Rather than maintaining a vast but costly network of subsidiaries and branches around the world, banks can open accounts with banks operating in specific currencies/geographical areas. The correspondent bank and the other bank then enter into a contract, with one bank performing banking services on behalf of a local bank, usually in a foreign country. The choice of banking partners is therefore crucial, especially when the banking institute is a local bank in a country considered to be at risk (high criminal density and/or poor compliance).

The legal economy also offers tools whose features are clearly appreciated by criminal organizations. Such is the case with offshore locations, where companies such as Limited Liability Companies (LLCs) can be domiciled. It guarantees anonymity of the beneficial owner thanks to the possibility of registering the company with a nominee director, that is to say a person who may well be nothing more than a front man. These services are legal and correspond to recognized legal structures. Equally legal are TCSPs (Trust and Company Service Providers), who can simplify the process of setting up an offshore company. With just a few clicks of the mouse, these online companies can offer you more or less elaborate packages, depending on the price you're prepared to pay, to help you set up a company that may, in fact, be no more than a shell company. Once again, intermediation plays on disempowerment: the service provider provides a legal service (assistance in setting up a legal structure) and can plead good faith if it turns out that the

service is being provided for a criminal who will use the said structure to launder money via fictitious financial movements.

On a completely different front, some encrypted telephony operators are lending their support to criminal organizations. The infiltration of the Encrochat and then Sky ECC encrypted communications services by investigation forces has been widely commented on in the news. Mainly because of the incredible wealth of exchanges between criminal organizations it reveals. But beyond this major police success, it should not be forgotten that the encryption applications and other services, such as the remote clearing of all data or the provision of a dual interface to track down investigators, were sold by legitimate telephone companies: the Canadian company Sky Global for Sky ECC and the Dutch company Encrochat. Sky Global's CEO was the subject of an arrest warrant by the U.S. Justice Department in March 2021 for offering services to prevent law enforcement agencies from combating drug trafficking and money laundering. The company defends itself by invoking "the fundamental right to privacy" and arguing that these services were aimed at journalists and activists, not criminals. Encrochat ceased operations in June 2020 following investigations and the compromise of its services. The line of defense is also that of the right to data protection, particularly for sensitive but legal professions. However, decryption of the messages showed that almost all users were criminals.

Corruption can also facilitate mafia infiltration of the legal economy. This aspect is less frequently mentioned and understood although this type of corruption marks a worrying point of convergence between the interests of criminal actors and the interests of legal actors. In the long term, it contributes fully to the assertion of criminal power in some territories. Two examples of current cases in Italy can illustrate this point. They have not yet gone to trial, but arrests have been made, charges brought, and the systems denounced described. One refers to the vicious management of social housing management on the one hand, and the other to the so-called zoo-mafia issue.

In some areas under mafia control, the criminal organization has de facto taken over the management of low-income housing.³ Theoretically, the mafia has nothing to do with the allocation of low-income housing, but empirically it is able to exploit the inefficiency of public services (fueled by a demand for social housing that outstrips the supply, and by excessively slow allocation procedures) to graft itself onto the system and select who will or will not have access to this housing. In order to artificially speed up the procedure, the population is then forced to

3 This strategy is identified in the DIA's 2022 report, second semester (Direzione Investigativa Antimafia: [DIA_secondo_semestre_2022Rpdf.pdf \(interno.gov.it\)](#)), p. 123, with regard to the camorra. It was at the heart of the arrests made on February 14, 2024, in Reggio Calabria (see, for example, the article in the Italian daily *La Repubblica*: [Reggio Calabria: anche sulle case popolari comandano i clan, 9 arresti. L'ex assessore, pentito di 'ndrangheta: "Significano voti" - la Repubblica](#))

turn to the local mafia families. In the case of Calabria, the payment of 5,000 to 8,000 euros to the clan enabled families to occupy an apartment, an occupation which was then quickly regularized by the corrupt administration. Mafiosi also used the system to their advantage, taking over apartments that were sometimes left empty but made available in case they went on the run. The mechanisms of artificial scarcity, grafted onto an initial objective scarcity (the lack of social housing in deprived areas) and networks of corruption, clearly operate and enable mafia families to discriminate between those who do and those who do not have access to resources, by favoring affiliated members and those of the population willing to compromise. The particularity of this situation lies in the fact that the mafia is able to condition access to a service over which it has no property rights. It gives criminals power over the population and over politics, since the objective pursued—and emphasized by one repentant member—is not so much enrichment as control over votes. Indeed, the “beneficiaries” of the system also receive voting instructions in addition to the apartment.

Another example of how corruption may help the criminal infiltration of legitimate businesses is what the Italians call zoo-mafia.⁴ The problem affects several Italian regions, both north and south. Sicily is particularly hard hit by this plague. Between 2016 and 2023, almost 900,000 head of livestock (sheep, goats, calves, and cows) disappeared in Sicily. In the first five months of 2024, 30,000 head of cattle disappeared. Animal trafficking is in the hands of Sicilian mafia families but relies on a whole network of accomplices and the conditioning of resistant breeders and farmers. Among the professionals to be indicted for external conspiracy in a mafia association are veterinarians, administrative staff, industry operators and, occasionally but less markedly, breeders. Fraud is deployed in a variety of ways, all of which potentially jeopardize food safety. Breeders are forced to sell their animals to (legal or illegal) slaughterhouses recommended and/or owned by the mafia. At the same time, animals that may be ill are introduced into the legal circuit, either through clandestine slaughterhouses, or because they are sold without health controls, or because they obtain false health certifications. The investigators have uncovered that the meat industry has made deals with organized crime (even if it has to be confirmed at trial). The motivation for the meat industry is purely financial: to buy infected animals at a lower price than healthy ones, then to introduce this meat, obtained at lower cost and without respecting health standards, into the legal meat chain and, of course, to sell it at the price of healthy meat.

Zoo-mafia is an example among others. This convergence between organized crime and industry is not an exception or a Sicilian-Italian specificity. But it is a convergence that is often underestimated or even denied. Yet a look at the trafficking of industrial waste shows a similar pattern. Forced labor, or what the

4 See, for instance, in *La Repubblica*: [Zoomafia: tra fondi dirottati, burocrazia connivente e dossier secretati ecco il nuovo grande business della criminalità organizzata - la Repubblica](#)

Italians call caporalat (*caporalato*) is another illustration: criminal groups offer themselves as service providers, offering legal companies with a labor force that can be exploited at will. The agricultural and construction sectors are particularly sensitive to this problem. Here again, contractors identified with this form of modern slavery justify themselves in terms of competitiveness.

So What's to Be Done?

The problem of “external conspiracy in Mafia associations” or, more generally, in criminal associations is, most likely, set to intensify over the next few years. There are two major and intertwined reasons for this. It seems that we are witnessing the establishment of a genuine “transgression market,” which is trivializing offences. At the same time, the boundary between the legal and the illegal is weakening, with serious consequences for the stability of our institutions. All too often, corruption is trivialized, tolerated and even justified especially when the criteria of acceptability are exclusively economic.

It is therefore essential to fight corruption preventively, by attacking the temptation of collective entities to abuse their powers for personal ends. This is all the more urgent given that some economists claim to be in favor of what they call “economic hegemony.” Very concretely, economic hegemony is defined as the desire of certain economists to appropriate all areas of thought and to have economic tools adopted by the other social sciences (Lazear, 2000). This position leads to the creation of a market for transgression, institutionalizing fraud and corruption. Such a market attributes a price to any infraction. The economic agent then assesses whether this price is acceptable in relation to the expected gain from the offence. If corruption (especially that which accompanies criminal infiltration of the legal economy) is insufficiently identified and punished, then it brings in more than it costs. Therefore, corruption is economically acceptable and the right option in terms of economic rationality.

This logic deconstructs the legal foundations of our economies, shatters the idea of the common good and carries a real democratic risk. Acemoglu and Robinson in *The Narrow Corridor* (2019) invited us to consider that democracy is not the final stage in a process of economic and political progress. Therefore, democracy is not an immutable achievement. On the contrary, we find ourselves in a “narrow corridor”: the road to preserving our democratic systems is still to be pursued, and it is constrained and fragile. Tackling corruption in all its forms, whoever the perpetrators, is part and parcel of an effort to “widen the corridor.”

Fighting corruption in all its forms also means re-establishing the visibility of the boundary between legality and illegality. The real issue at stake is not economic efficiency, but the corrosion and destruction of the moral and political cement of civil society. This brings to mind Edwin Sutherland's concept of

“white-collar crime.” When he wrote in 1939, crime was traditionally associated with poverty and marginality. Sutherland highlighted the capacity of the legal sphere to commit offences. This type of crime, he stressed, is particularly serious, as it contributes to the breakdown of society and the loss of confidence in institutions. One may wonder what Sutherland would have said had he also considered the convergence between elite delinquency and organized crime.

More concretely, what lessons can be drawn from these reflections for the fight against mafias and organized crime groups? First of all, it is necessary to reassess the scope and risk of corruption in all its various forms. In this respect, it is urgent to stop thinking in silos (e.g., by only incriminating the public sphere, or by limiting corruption to illegal trafficking) and to take into account that organized crime’s relationship with the legal sphere is not always one of subjugation. Rather, it can also involve voluntary and deliberate complicity. This makes the task of judges extremely complex. They have to detect the different degrees of complicity. They also need tools such as the external conspiracy in mafia associations to do this properly. Finally, we also need to think more broadly about the risks that the cult of economic rationality poses to the sovereignty of our States. This has already begun to emerge in relation to ports and the lack of control over incoming goods. Such an awareness ought to be extended to the criminal infiltration of the legal economy. Infiltration is not just about laundering dirty money. The aim is also to assert a criminal power that is incompatible with the rule of law.

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Crack Cocaine in Paris: A Little-known Dimension of “Globalization from Below”

Michel Gandilhon

Cnam Security and Defense Research Team

Over the past 50 years or so, the *modou-modou*—a contraction of Mohamed and Mamadou, which colloquially designates a street vendor in the Wolof language—has become an almost habitual figure on the Parisian streets, from the tourist districts to the most disadvantaged areas. Peddling jewelry, African objets d’art and knick-knacks for holidaymakers, as well as illicit psychotropic substances, the *modou*, contrary to appearances, is not an isolated wretch, a sort of *luftmensch* condemned to wandering. The *modou* is a subject in a very special world. A world irrigated by transnational community networks, by commercial networks specializing in the import-export of legal and illegal goods, and by legal and illegal financial flows, in which the web of “globalization from below”¹ is woven day after day—a globalization that is “cultural, not just economic,” working “underneath the States, in their cracks, their shortcomings,” whose “players are unexpected—the ‘ants’ of international trade, who weave the web of innumerable networks, ‘informal notables’ from the Maghreb or Senegal, mafiosi, etc.”² One aspect of this is the crack economy that developed in the Paris region from the 1990s onwards. A phenomenon that has lasted for some thirty years, characterized by its great stability, and which has seen migrant networks of Senegalese origin gradually acquire a kind of monopoly of supply on a segment, albeit marginal, of the French drug market. A reality that belies the prevailing view of a loosely structured trade, driven by single men almost as disaffiliated as their customers.

Cocaine-Free base

Over the past 25 years, cocaine use in French society has risen sharply. According to the latest data published by the *Observatoire français des drogues et des tendances addictives* (OFDT), cocaine use reached an unprecedented level in 2023, putting France well ahead of the United States in terms of prevalence among the adult population. Between 2000 and 2024, it rose from 0.3% to 2.7% of the over-18 population, or around one million people.³ While the overwhelming majority consume it via the nasal route (sniffing), a minority, 0.3%

1 Tarrus A., *La mondialisation par le bas*, Balland, 2002.

2 Tarrus A., *op. cit.* 2002.

3 Spilka S., et al., «Levels of illicit drug use in France in 2023,» *Tendances*, OFDT, June 2024.

of the adult population, prefer the smokable route.⁴ This involves a chemical transformation process consisting of heating the hydrochloride mixed with ammonia or sodium bicarbonate. The mixture produces a solid crystallization conducive to the smokable route. The effect on users is much more rapid and brutal than that of cocaine. Its relatively short duration encourages users to multiply their intake, which generally leads to rapid dependence. In France, this form of cocaine is marketed under two main names: “free base” and “crack,”⁵ which in fact refer to the same product, but to different audiences and modes of circulation. The former refers to relatively socially integrated consumers who make their own product, while the latter refers to deeply marginalized street users in certain districts of northeastern Paris, supplied by dealers specifically positioned in this market.

The Emergence of Crack

While it's difficult to trace the origins of crack cocaine, the most serious hypotheses point to its appearance on the American market in the late 1970s, via users belonging to West Indian immigrants, particularly Jamaicans, who had developed the habit of smoking cocaine or, rather, base paste. The encounter with this intermediate product between coca and hydrochloride is thought to have been due to a shortage of precursors, notably ethyl ether, in Colombia. Some traffickers decided to move the refining of cocaine paste-base (PBC) to the West Indies, or even to export it directly to Florida, hoping to generate local consumption of PBC (basuco) similar to that in Latin America. Some cannabis users will get into the habit of smoking PBC and, by emigrating to the U.S., contribute to the development of a specific demand for smokable cocaine. As the use of PBC did not spread, drug dealers succeeded in producing crack cocaine by adding bicarbonate of soda or ammonia. Crack cocaine expanded rapidly in the poorer neighborhoods of American metropolises, particularly among blacks and Hispanics.

In France, crack emerged in the mid-1980s in Guadeloupe and Martinique, then quickly took root in mainland France, and particularly Paris, via users from the West Indies.⁶ At the time, the supply, which tended to be small-scale, was run by West Indian dealers, who were themselves often users, in a context where many drug users were looking for substances to complement heroin, whose use was booming at the time. Part of the heroin supply in Paris was therefore handled by Senegalese networks. This was also the case in other French cities, notably Marseille. They are made up of former itinerant dealers in African art objects and jewelry, whose economic environment was affected by the arrival heroin in the

4 Spilka S., *op. cit.* at 2024.

5 Gandilhon M., and Cadet-Taïrou A., “Cocaine based in mainland France: recent developments,” *Tendances*, 90, 2013.

6 Marchant A., «L'arrivée du crack à Paris, entre fantasmes et réalités,» *Swaps*, 70, 2013.

early 1980s. The traditional trade, particularly rooted in the Ilot Chalon, a run-down neighborhood adjacent to the Gare de Lyon railway station and home to a concentration of North African and sub-Saharan immigrants, tended to decline as a result of the massive presence of drug addicts and police raids, favoring the transition from itinerant sellers to a much more lucrative trade; a gram of heroin was then trading at 600 francs, or 200 in today's euros, according to the testimony of one importer: "I was forced [...] to close one of my three stores, as many of my salesmen, whose earnings hardly exceeded 1,500 francs a month, opted for the more lucrative sale of heroin."⁷ From then on, when crack arrived on the scene, these networks, which had already gained experience on the heroin market, had no difficulty in conquering the monopoly of crack resale on the Paris market. All the more so as, from the 1990s onwards, Senegal became a transit zone for cocaine produced in Latin America destined for the European market, via the port of Dakar in particular, while cocaine and crack consumption began to develop there. Interestingly, crack emerged in Dakar in the early 1990s at roughly the same time as in Paris: "Crack has been making inroads in Dakar since 1993. The minimum dose, half a stone, is only worth 2,500 CFA francs (3.8 euros)."⁸ However, one question remains unanswered: the history of the encounter between Mouride migrants and crack cocaine. It is possible that it took place in the 1980s in New York's Spanish Harlem district, just as the crack epidemic was beginning to develop. Senegalese emigrants had a strong presence in the street market for African art objects.⁹ This American initiation may well have spread to France and other European countries.

Mouride Transnational Trading Networks

This hegemony of Senegalese, or rather Wolof, networks on the Parisian crack market has never really wavered. Today, even if the players involved are diversifying, trafficking is still mainly carried out by men of Senegalese origin, belonging to the Wolof ethnic group, which accounts for 45% of the population. The persistence and deep-rootedness of these networks in the Paris crack market over the past three decades can only be explained by the existence of a genuine ecosystem rooted in strong community dynamics (in Senegal as in France), enabling the networks to withstand the test of police repression, and even attempts to oust competitors, as was the case in the 1990s and 2010s with the beginnings of the establishment of dealers belonging to the "cités" universe. In this respect, the role played by transnational networks stemming from the Mouride Sufi brotherhood—a term derived from the Arabic *murîd* meaning "aspirant" or "postulant"—is crucial. As a specialist in transnational Mouride networks writes,

7 Beau N., «Raser l'ilot Chalon et après?» *Le Monde*, 1984.

8 Labrousse A., (ed.) *Dictionnaire géopolitique des drogues*, De Boek, 2015.

9 Mandel J.-J., «Le djihad capitaliste de la confrérie des mourides», *Histoire et société*, December 2013.

their commercial activities are driven by “groups whose coherence and effectiveness are based on membership of the brotherhood.”¹⁰

Almost all the *modous* involved in the French crack trade belong to this group. Today, the Muridiya appears to be the most powerful brotherhood in Senegal, to the point of constituting a veritable state within the state, influencing the course of elections and ensuring, through a dense network of charities, a form of social peace. Some estimates put its membership at five million, or between 30% and of the Senegalese population. Touba, the religious capital of the Mourides, is Senegal’s second-largest city after Dakar. Every year, this capital is the scene of the Grand Magal, a huge gathering in tribute to Amadou Bamba, born in 1853 and died in 1926, the founder of the brotherhood at the end of the 19th century during French colonization.¹¹ While the brotherhood is part of the tradition of African confraternity Islam, it is distinguished by a number of singularities that explain the presence of its members on a number of markets, both licit and illicit, in Senegal and the rest of the world.

The first is the valorization of exile, which encourages certain members of the brotherhood, whether rich or poor, students or street vendors, to go abroad to relive the experience of the founding Sheikh, exiled twice by the French colonial power to Gabon and Tunisia, and of the Prophet Mohammed, who had to leave Mecca for Medina at the time of the Hegira: “Migration thus becomes well-founded because it is seen as a divine test, or as a mission to reverse roles - to go and earn money from the Whites to strengthen the power of the brotherhood [...].”¹² Migration is also symbolically “colonization in reverse.”¹³ The second is the valorization of the brotherhood member’s enrichment, conceived as a sign of election, through a mystique of work and entrepreneurship which, according to some specialists, is the basis of a kind of Mouride ethic of capitalism comparable to that identified by Max Weber for Protestantism: “Work as if you were never to die, and pray as if you were to die tomorrow.” What seems to differentiate Mouridism from European Protestantism, however, is the absolute submission of the *talibé* (disciple) to the religious hierarchy of the marabouts, who combine, according to a Wolof proverb, “having, knowing, and power.” This submission manifests itself through an initiation ceremony in which the *talibé* kneels before his sheikh and pronounces a vow of obedience, reducing him to the status of “corpse in the hands of the washer of death,” and then through the regular payment a donation (*adiya*) which,

10 Salem G., «De la brousse sénégalaise au Boul’Mich: le système commercial mouride en France,» Cahiers d’études africaines, 81/83, 1981.

11 Monteil V., «Une confrérie musulmane : les Mourides du Sénégal,» Annales de sciences sociales de religion, 14, 1962.

12 Bava S., «Reconversions et nouveaux mondes commerciaux des mourides à Marseille,» Hommes et migrations, 2000.

13 Sall L., «Soufisme et utopie économique-religieuse : les entrepreneurs mourides sénégalais à l’assaut « des métropoles occidentales,» Lien social et Politiques, 2014.

in exchange, guarantees the follower magical-religious protection, through the manufacture of talismans, and the certainty of reaching paradise. In immigration, the same system is perpetuated by the dahiras, community living spaces where the marabout and his followers meet. These form the link between the brotherhood and the diasporas, who play an increasingly important role in financing its operations: *"Work, now often equated with money, has become a central value for Mouride migrants; it is mainly they who inject it into the brotherhood. When the dahira-s take up "collections" for work on the mosque and hospital in Touba, or for the organization of the pilgrimage, migrant talibé-s often pay at least five times more than non-migrant talibé-s. Just as a man pays more than a woman, there is a hierarchy in the sums paid."*¹⁴ In this way, she can count on donations from the large Wolof diaspora present in many countries, from the United States to Europe, and particularly in France and Italy, fueled by the accelerating waves of immigration since the late 1970s. A period marked by the crisis of the economic model established during colonization and based on the cultivation and export of peanuts. In line with its work ethic, the Brotherhood had invested so much in this activity that it accounted for almost half of the country's production at independence. The crisis of this economic model, due in particular to drought and soil exhaustion, led to numerous migrations to the cities and abroad, while forcing the brotherhood to look for other sources of income.

Over the years, these transnational Senegalese communities have built up economic networks, and some of them have become wealthy. Paradoxically, this process was encouraged from the mid-1980s onwards by policies advocated by the World Bank, based on criticism of protectionism. Lower import taxes led to a boom in import-export activities in the telephone, textile and automotive sectors, creating a kind of local *comprador* bourgeoisie. Some of the poorest members of the Senegalese diaspora have positioned themselves in certain segments of the more visible licit and illicit markets, such as cigarette smuggling, art trafficking, counterfeiting, tourist trinkets and ... the resale of heroin, cocaine or crack cocaine: *"In addition to refusing, sometimes violently, to sell hard drugs to Muslims, the Mourides are unique in that they can sell statuettes, trinkets, leather, clothes and drugs. Their own organization in networks enables them to invest in this or that activity which requires this type of organization."*¹⁵ By the 2000s, this was a reality found every European country where the diaspora was present. In Spain, for example, they are involved in heroin trafficking, while in Italy, according to the police, almost all the Senegalese arrested for drug trafficking belong to the¹⁶ brotherhood. In Senegal, the Brotherhood, in addition to its legal economic and charitable activities,

14 Bara S., « De la 'baraká' aux affaires : ethos économique-religieux et transnationalité chez les migrants sénégalais mourides, » *Revue internationale des migrations*, 2, vol 19.

15 Missaoui L., Tarrius A., *Héroïne et cocaïne de Barcelone à Perpignan : des économies souterraines ethniques de survie à la généralisation des trafics transfrontaliers de proximité*, OFDT, 1999.

16 Labrousse A., *Observatoire géopolitique des drogues*, 2006.

is said to be involved in trafficking arms, cars, legal medicines and psychotropic drugs, which are the main cause of drug addiction in the country: “*Drug networks in Senegal are centred on Touba, the holy city of the Mouride brotherhood, whose status as an autonomous rural community—the State is absent, and in particular does not exercise any of the functions of maintaining order or controlling trade—makes it ideal for a wide range of trafficking activities: peanuts, arms, drugs, in particular.*”¹⁷ The majority of prisoners involved in drug trafficking (marijuana, heroin, crack) belong to the Brotherhood. Recently, the scandal of the exploitation of children forced to work in Koranic schools has hit the headlines, highlighting the predatory dimension of the domination over the faithful exercised by part of the religious hierarchy.¹⁸

Modous Networks in France: The One and the Many

For members of the brotherhood drug trafficking, like the trade in trinkets for tourists, is an economic activity (almost) like any other, serving to enrich the family clan and the meta-family that is the brotherhood. In France, as in other European countries, these two activities are at the heart of the *Modous'* itinerant trade, and they can switch from one to the other. Moreover, the brotherhood does not intervene in the way drug trafficking is organized. It simply receives part of the proceeds the form of donations to the religious hierarchy. The traffic should not be thought of as a hierarchical, pyramid-shaped organization: “*We don't have a boss, but we all know each other as Senegalese [...]. Street vendors generally belong to the same Sufi brotherhood, the Mourides. Well, the deal may not be in line with these religious precepts, but at least among us, nobody touches crack. That's a golden rule.*”¹⁹ The physiognomy of the trade resembles more a nebula made up of a multitude of independent, separate micro-networks, but linked together by ethno-religious affiliation producing forms of solidarity when necessary. An indicator of this fragmentation of trafficking could be the very high ratio between the number of crack dealers arrested and the number of users who are also arrested in Paris. Between 2015 and 2018, according to data from the Office central pour la répression du trafic illicite de stupéfiants (OCRTIS), this ratio reached an average of around 70%, compared with around 25% for all drug-related arrests in 2018 throughout France.

These networks, made up of a few individuals at most, are structured around the most experienced person, who generally has the skills to “cook” crack, and brings together dealers who generally belong to his or her family clan. They gen-

17 Fassin D., «La vente illicite des médicaments au Sénégal. Economies parallèles. Etat et société,» *Politique africaine*, 23, 1986.

18 Kane C., «Au Sénégal, scandales pédocriminels en série chez les maîtres coraniques,» *Le Monde*, August 11, 2023.

19 Kauffmann A., «Voyage dans l'enfer du crack,» *Le Monde*, September 18, 2018.

erally operate in large, open consumption scenes, which require a certain level of organization and cooperation between networks in order to manage the distribution of customers, the supply of product and the protection of the premises from police interference. There are also resale networks for a more established clientele, where the product(s) is (are) delivered to the customer's home, or by pre-arranged appointment. What is remarkable, and what makes these networks so strong, is the continuity of the traffic, which is ensured by a rotation of personnel made possible by a continuous flow of immigration. This is supported by the Senegalese diaspora in France, which numbers over a million people including those with dual nationality, and which is dynamic and well-versed in legal and illegal immigration channels. Some migrants arrive legally, thanks to short-term visas, for family or tourist reasons, while others arrive illegally, seeking asylum. Today, it seems that the majority are smuggled in via Italy or Spain, mingling with the ever-increasing flows from sub-Saharan Africa. Dealers already based in Paris provide support in terms of access to resources such as false papers, money and accommodation. Traffickers wishing to return home either permanently or, for example, for the Grand Magal pilgrimage, will ensure that they are replaced by a family member. Crack-making training is sometimes even provided in Senegal, with the blessing of a marabout who, for a few hundred euros, will give the trafficker an amulet to protect him from the vicissitudes associated with this type of activity, particularly from the police.

Maintaining a permanent link with the country is therefore a vital necessity. Including for the supply of cocaine to be based. Indeed, it seems that the *Modous* do not buy from "native" wholesalers and semi-wholesalers, especially those from the housing estates. This is a world in which they have no confidence and which they fear because of the sometimes-violent disputes. The use of "community" networks would be preferred, to ensure a regular, low-cost supply of cocaine from West Africa. As a result, a kilogram can be traded in Senegal for around 15,000 euros, while in the Paris region, the price is twice that. In this context, some networks make joint purchases from wholesalers, preferring to traffic small quantities of cocaine carried by "mules," usually women, using air transport. On the outward journey, these mules may carry cash from the various trafficking operations. When it comes to repatriating crack money—according to some estimates, generated over 200 million euros in France in 2017—in addition to using legal transfer systems such as Western Union, preferred technique is the *hawala*, which means "trust" in Arabic. This system is a kind of "clearing house" which, by definition, has the advantage of avoiding the physical movement of money. The proceeds of the traffic are generally entrusted to a merchant based in the Paris region, who, in exchange for a commission, will instruct a correspondent, generally operating in the import-export business in Senegal, on whom he has a claim to pay the sum to family members back home.

Police and Penal Response

Until recently, the fight against crack cocaine trafficking has never really been a priority for law enforcement agencies. This is probably due to its highly localized nature, in a context where the fight against drug trafficking has long been characterized by a policy of numbers. Indeed, the fight against crack trafficking is not very rewarding for the police, if only in terms of seizures, which appear tiny compared with those of cocaine and cannabis resin. Some police officers also point to a kind of demobilization due to weariness in the face of a penal response deemed lax and incapable of preventing drug traffickers from reoffending, and of enforcing decisions to expel drug traffickers from the country at the end of their sentences.

Over the years, the police response has been merely reactive, dictated more often than not by recurrent mobilizations—the first as early as 1993/1994, the second in the early 2000s with the “collectif anticrack,” and the most recent in 2018 with the “Stop the crack market” petition—by local residents adjacent to open drug scenes, particularly in the Stalingrad district. While these irruptions, widely reported by the media, have led to significant measures such as the creation of the Priority Security Zone (ZSP) in the 19th arrondissement in 2013, and the Local Group for the Treatment of Delinquency (GLDT) in 2016, the public response has essentially been based on a so-called “saturation” policy aimed at exerting pressure on users and dealers by mobilizing large numbers of staff on the trafficking territories on an ad hoc basis, in order to limit their presence. This policy has resulted in the geographical displacement of drug trafficking in Paris and the inner suburbs. But in recent years, in view of the scale of the nuisance caused by crack, public policy has changed its approach. In 2022, the Minister of the Interior, Gérald Darmanin, declared his intention to eradicate trafficking in Paris. He even traveled to Senegal to meet with his counterpart in order to get that country to take back its nationals subject to an obligation to leave French territory (OQTF). It would appear from Antoine Félix Abdoulaye Diomé’s statements that the reception was frosty, with the Senegalese minister denouncing a marginal issue based, what’s more, on “clichés” targeting the Senegalese community.

Two years later, we have to admit that far from having disappeared, trafficking continues in Paris. The tougher penal response to trafficking is proving insufficient to dissuade would-be traffickers. A survey carried out by the daily *Le Monde* in the town of Louga showed many young people wanted to immigrate to Paris to traffic.²⁰ Although the law provides for sentences of 20 years for the manufacture of narcotics, and 30 years if the offence is committed by an organized gang, the maximum sentences are barely four years, which can be reduced to two or three years’ imprisonment if the sentence is adjusted. A recent illustration of the failure

20 Foucher (de) L., De Louga au Sénégal à Paris, sur la route du crack, *Le Monde*, October 6, 2022.

of the criminal justice system is the case of a crack dealer arrested and released under judicial supervision, only to be rearrested three months later for manufacturing crack cocaine. The verdict? A one-year suspended prison sentence and an electronic bracelet. While the dismantling of the major open scenes, from La Colline in 2019 to Forceval in 2022, has certainly made trafficking less visible, according to observers on the ground, the *modous* have adapted, while other players attracted by a booming cocaine-based market are coming to the fore.²¹ Crack, which has long been specific to Paris, is now spreading to other cities, while networks from outside the *modou* world are getting involved in the resale of the product.

*This analysis is based in part on data published by the study, “Crack en Ile-de-France,” conducted by INSERM and OFDT in 2019 at the request of the Ile-de-France Regional Health Agency. For the part dealing with crack supply, data collection was based in particular on the analysis of investigation reports for crack trafficking, supplemented by ethnographic observation, interviews and focus groups with law enforcement agencies. A full summary of the study is available here: [field_media_document-5842-eisxac2b1.pdf \(ofdt.fr\)](#)

21 Pfau G., TREND Report Paris, 2024.

The Influence of the Criminal Psychology of Islamist Terrorists on Military Operations Abroad

Natacha Spehar

From Alexander the Great (356 BC–323 BC) to Emperor Mauritius (539–602), via the Zealots and then the Assassins (1090–1215), Al-Qaeda and the Islamic State, the world has constantly encountered terrorism in its various forms and ideologies, which have evolved over the centuries.¹

The most striking terrorist attack of recent decades was that of September 11, 2001, when the whole world witnessed first-hand a massive act of terrorism committed on the territory of the world's most powerful country. For the general public, this event is engraved in their memories as an act of fear and terror, but for the armed forces, this attack is the beginning of a “new terrorism,” an attack planned in millimeters outside the borders of the East, prepared by cultivated, educated individuals who have evolved in the Western world.²

Terrorism is no longer just the work of national anarchists acting on their own territory against policies or ideologies they oppose. Terrorism is now extra-territorialized, and the cards in the fight against it have been reshuffled. The armed services, their missions, their technologies and their fight against terrorism must evolve at the same time as the criminal psychology and methods of terrorists.

The main question we need to ask ourselves is: how can a theater of operations comprising several OPEX operations fail to annihilate terrorist groups? The answer is complex, but the first certainty is that the enemy cannot be defeated, because it migrates, it changes, it evolves constantly as armed forces attack its structures and resources. But also, because terrorism has a new face, that of globalization, with an ideology and recruitment that are widespread thanks to social networks and international cells. The evolution of terrorists' criminal psychology enables them to remain invisible while operating internationally, until they are caught.

The evolution of the criminal psychology of terrorists is forcing conventional armed forces to reinvent themselves by setting up long-term operational theaters, whereas the principle that dominated post-Vietnam War OPEX was short, stealthy deployments that did not require a lasting presence on a territory.

1 Post, Jerrold M. (2007). “The mind of terrorist: the psychology of terrorism from the IRA to Al-Qaeda,” edition Palgrave Macmillan.

2 Etienne, Bruno. (2002). “Les amants de l'apocalypse,” Édition de l'Aube.

Indeed, since 2001, it has become difficult or virtually impossible to combat terrorism, or at least to contain it, without direct, long-term intervention in the “host” countries of Islamist fighters. To combat them more effectively, it is first necessary to break the terrorists’ hold within their own countries, and then to gather enough intelligence to prevent further international attacks.

This was the case in Iraq, for example, and even more so in Africa, where there is already a strong feeling of colonialism on the part of “white” people.³

Governments no longer want to see wars of stalemate lasting decades, as was the case with the Vietnam War. However, the evolution of terrorists is undoubtedly leading to a long, drawn-out war (experts seem to agree that the war against terrorism seems to be never-ending, because as far back as the time of “the assassins” in 1090, there was already a fight against terrorism) and a hybrid war (it includes physical combat as well as ideological warfare on social networks...). Nowadays, it only seems possible to limit this war, as the actors and means used by terrorist groups transcend all borders.

After the failures of the wars in Afghanistan and Iraq, the war has become a stabilization operation⁴ still involving intense combat against terrorist groups, but with a reduced number of conventional armed forces, as the allied countries no longer have as many financial, human and material resources as before.

According to Xenophon (430–355 BC), war was culturally determined. This is still the case today, since warfare changes according to the psychology of terrorists, the culture of terrorist groups and their evolution.

For some researchers, “understanding the other’s culture is the ultimate answer to solving strategic dilemmas.”⁵

This phrase seems perfect for high-intensity wars or in the presence of state-sponsored terrorism, where it’s easier to understand the adversary’s culture. For example, we can understand the culture of Russia and the Ukraine to resolve strategic dilemmas, because these countries have a fairly clear diplomatic line, and we can understand their military strategies in the light of their history and politics ... but can we really know and understand the culture of an Islamist terrorist? If this were really the case, shouldn’t the USA and its allies have won the war on terror? Or is Islamist terrorism such a mixture of cultures adapted to each terrorist group that their own culture and strategy is impossible to understand?

If we look at the history of warfare, enemies often act according to their culture, which would explain the dysfunctions that can be found among terrorist

3 Boniface, Pascal. (2008). “les opérations militaires extérieures,” *Pouvoirs*, n°125, pp. 55–67.

4 Grant, Rebecca. (2005). “The Fallujah model,” *Air Force Magazine*, vol 88.

5 Schmitt, Olivier. (2020). “opérations extérieures et culture stratégique française” in : Fernandez Julian, Jeangène Vilmer, Jean-Baptiste. (2020). “Les opérations extérieures de la France,” ed CNRS, pp. 57–78.

groups such as al-Qaeda, EI or Boko Haram. In Mali, for example, several terrorist groups operate with different cultures, creating ethnic and tribal disparities and complicating the interventions of armed forces who have to adapt to a multitude of cultures, all of which influence the way terrorists act and think.

The evolution in the criminal psychology of terrorists is also reflected in the fact that, prior to 2001, discussions of surrender and peace treaties were possible with certain terrorist groups (political or religious), but now, the rule valid for all countries at war against terrorism is the absence of any discussion.⁶

For radical Islamist terrorists, the only solution is death.

This lack of negotiation makes wars and anti-terrorist operations permanent, making it impossible to envisage the end of conflicts, and interventions in countries requesting international military aid become part of the problem, because they last. What's more, as external operations have often become stability operations, our soldiers have to train local armed and security forces in the fight against terrorism. Indeed, theaters of operation have evolved according to the criminal psychology of terrorists, the way they fight conventional armed forces, and the emergence of new terrorist groups, as OPEX have moved from large-scale warfare (Iraq war, Afghanistan war with Al-Qaeda and the EI) to stability operations (Mali with Boko-Haram ...).

The new face of warfare shows Western countries no longer able to consolidate the powers that be in countries plagued by Islamist terrorism,⁷ while in countries without Islamist terrorism, Westerners manage to consolidate the political powers they have helped to establish. Today, the evolution of terrorists' criminal psychology enables them to highlight the failure of governments to protect their populations, creating a constant feeling of insecurity.

Over the centuries, wars have evolved in response to terrorist attacks, and the mission of soldiers in OPEX has changed, as has their commitment. In the past, wars were fought to overthrow ruling regimes in order to establish democratic regimes, but nowadays it's no longer a question of placing "allies" in power of these regimes—it's a question of waging war against terrorist groups that are not states (no defined territory), that are multiple and dispersed across different countries

In contrast to the various high-intensity wars that the European continent has experienced, lower-intensity wars outside Europe are becoming increasingly

6 Charbonneau Bruno, Debos Marielle, Hanon Jean-Paul, Olsson Chirtsian, & Wasinski Christophe. (2021). "De la guerre contre le terrorisme aux guerres sans fins; la coproduction de la violence en Afghanistan, au Mali et au Tchad," *Culture & conflits*, n°123-124, pp. 67–82.

7 Pérouse de Montclos, Marc-Antoine. (2018). "Face à Boko Haram, l'impossible coalition," in Badie, Bertrand, and Vidal, Dominique. (2018). "Qui gouverner le monde?" ed *La découverte*, pp. 316–323.

difficult to win, mainly because soldiers are fighting in unfamiliar areas, with varying climatic conditions, in hostile places such as the mountains of Pakistan or Afghanistan (see attached testimonial), the rice paddies or jungles of Vietnam, which is a huge disadvantage in battle because the enemy knows his terrain perfectly and can hide anywhere, but also because the ideology of terrorists has changed as has the geopolitical environment.

As a result, the conventional armed forces of countries fighting terrorism have to adapt and evolve in line with the terrorists. It's not just a question of attacking their structures and leaders ... we now need to consider all possible avenues for combating these terrorist groups, and this requires new, more powerful technologies, new intelligence-gathering techniques and the fight against the spread of ideology via social networks. Unfortunately, with the evolution of the criminal psychology of terrorists and its influence on OPEX, this fight seems endless.

Indeed, during OPEX, the mission of the armed forces, as well as their intervention techniques, will vary according to the terrorist groups they are fighting. Each terrorist group has a different criminal psychology (study of the psychic facts and causes that lead an individual to commit criminal acts), even if the predominant ideology is the dominance of Islam over the Western world.

In the 21st century, according to Anne Maria Möller-Leimkühler,⁸ the Islamist doctrine of terrorist groups may be “based on fundamentalist political or religious ideologies” that legitimize the violence committed by these groups. For example, Islamist extremists believe that only the true religion (radical Islam) should remain in the world, which justifies terrorist attacks not only on Westerners fighting against this extremism, but also on liberal Muslims practicing non-radical Islam. It is with the aim of limiting the actions of terrorist groups and the spread of their ideology that OPEX operations have been set up, and the outlines of intervention (necessary resources, intervention techniques, etc.) have been defined through a military doctrine for a better fight against terrorism

This difference in ideology, which is reflected in the way terrorists fight, is mainly the result of an evolution in their interpretation of the Koran. Terrorist groups interpret the Koran differently and give it the meaning they want (radical interpretation of the Koran and its suras), which enables them to justify killing innocent civilians (unbelievers) in the name of Allah, as was the case with Bin Laden, who justified his October 1996 attacks on civilians in the USA by citing the writings of the Koran.⁹

The most recent example of this “justification” appears to be the attack

8 Möller-Leimkühler, Anne Maria. (2017). “Why is terrorism a man’s business?” CNS Spectrums, Cambridge University Press.

9 Post, M. Jerrold .(2007). “The mind of terrorist: the psychology of terrorism from the IRA to Al-Qaeda,” ed Palgrave Macmillan.

on a Russian concert hall on March 22, 2024, claimed by EI. When claiming responsibility, the EI said that the civilians had been killed because they supported their country's anti-Muslim policy. In reality, this justification by Islamist terrorist groups is merely a practical and symbolic means of achieving a more ambitious objective¹⁰ which could be a show of force and a desire to frighten people.

Fear is part of the very definition of terrorism, as is intimidation. To succeed in instilling fear in the minds of Westerners (the main targets of Islamist terrorist groups today), terrorists rely on the group effect, since a group is more frightening than an individual. Group psychology is therefore a key variable in the minds of terrorists, in their actions and in their recruitment.

With the internationalization of terrorist acts, a "violence of fear" and a feeling of insecurity are emerging among populations, including those not usually familiar with the terrorist threat.

"While nothing is easier than denouncing the evil-doer, nothing is more difficult than understanding him."¹¹ When it comes to terrorism, can we really understand it?

According to researcher John C.G. Horgan,¹² there is no such thing as a typical profile of terrorist psychologies, as the composition of groups is too diverse. This lack of profile has been confirmed by researchers Martha Crenshaw and Jerrold M. Post. From a psychological point of view, terrorists cannot be categorized as unstable because, in order to preserve the group and avoid any internal risk, terrorist groups themselves exclude those who are psychologically unstable.

Over the last few decades, the image of terrorists has changed in the eyes of the world. Indeed, for a long time, Western populations had the idea that a terrorist was a poor goat herder or opium grower from the depths of the mountains of Afghanistan or Iraq, with no intellectual culture and no openness to the world. But since September 11, 2001, this image has been challenged, as over the years terrorists have become better educated, some of them with a high social standing, while others have studied in the West¹³ as was the case for Bin Laden (educated, from a noble family, and educated in the USA).

For Jerrold M. Post,¹⁴ understanding the psychology of terrorists will enable us to fight them more effectively. If we understand their psychology, we can understand how they recruit, their ideology, why people join them and we can try to sow disorder within this group.

10 Hoffman, Bruce. (2017). "Inside terrorism," Paperback edition.

11 Dostoyevsky, Fyodor Mikhailovich. (1995). *Crime and Punishment*, Paperback edition.

12 Horgan, John. C.G. (2014). *The Psychology of Terrorism*, Routledge edition.

13 Etienne, Bruno. (2005). "les combattants suicidaires," L'Aube Publishing House.

14 Post, Jerrold M. (2010). "When hatred is bred in the bone: the social psychology of terrorism," *Annals of the New York Academy of Sciences*, vol 1208, pp. 15–23.

Paradoxically, while it's difficult to understand the criminal psychology of terrorists, they have no trouble recruiting by exploiting the psychological flaws of their future recruits (feelings of social exclusion, the search for self and employment, the desire to become someone but the impossibility of doing so in our society, not to mention religion).

When it comes to recruiting and training terrorists, the focus is on the group, and the individual is erased, i.e., identity becomes collective (without a group, terrorists are nothing). This provides a unifying message to give meaning to the lives of individuals within the group, and to recruit future fighters who feel excluded from society, outside its values, and who could find themselves in the "terrorist family." The unification of members is reflected in the training of fighters in terrorist groups. For example, al-Qaeda is an Islamist terrorist movement that structures its entire organization, right down to the training of its fighters, with a published operations manual covering training techniques, training courses and their contexts, as well as how to assassinate a person or resist interrogation. According to Jerrold M. Post, every possible course of action seems to have been envisaged in this manual. The most striking article in the manual is Article 8, which advocates techniques for concealing oneself in a crowd, which was perfectly applied by the terrorists of September 11, 2001. For example, a terrorist should not wear a long beard, as this could draw attention to himself, and he should behave like the inhabitants of the country he is in.

In terms of recruitment, the 21st century has seen the emergence of international terrorism, with recruitment and the spread of ideologies no longer confined to the borders of the Middle East. Indeed, in June 2014, EI took over al-Qaeda's recruitment codes, modernizing and internationalizing them, i.e., no longer confining itself solely to fighters from the Middle East.¹⁵ As a result, the terrorist group EI now recruits fighters from all over the world, without any borders, thanks to new technologies and, above all, the emergence of social networks.

This internationalization of recruitment and social networks enable terrorists to highlight the image of the terrorist group's "Leader," who attracts future recruits with his aura, his word, his promises, and who makes those who want to join a terrorist group dream of becoming a person or gaining recognition, identifying themselves with this leader through strong propaganda.

What's more, while terrorists exclude all psychologically unstable or weak people from their groups, they use social networks to play on the weak psychology of future recruits, on their family or social problems, on their sense of not belonging to any particular group to recruit them. They put forward new utopias, a promising future filled with glory, a future and a place within a group, a family

15 Jones, Edgar. (2017). "The Reception of Broadcast Terrorism: Recruitment and Radicalisation," *International Review of Psychiatry*, vol 29.

(terrorists call each other “brothers”) that “only terrorist groups” can offer. Terrorist groups use social networks to recruit Westerners rather than just “locals.”

International recruitment, and consequently the development of training camps for future terrorists, has led to an increase in the number of fighters in terrorist groups, which has had a considerable influence on OPEX. For example, intervention in Afghanistan (Operation Enduring Freedom) was primarily aimed at eliminating terrorist leaders, but also at dealing a blow to the organization by eliminating its training camps and weapons stockpiles.¹⁶ In 2004, the International Institute for Strategic Studies wrote that a blow had been struck, but the organization had risen and mutated to become decentralized, virtual, and invisible.

Since the Vietnam War, the missions of the air force have been stepped up, in particular to limit collateral damage (especially to civilians, who are the terrorists’ preferred targets), thanks to new technologies such as laser-guided bombs for more precise firing.¹⁷ In addition to the air force, this limitation also applies to ground forces, which can use hellfire to destroy a target.

War has a new face, as the instruments of warfare evolve according to the threat and the geopolitical context.

In order to alleviate the problems of instability linked to the various terrorist groups, allied forces are called upon by local governments to help them in their fight against terrorist groups, in order to obtain training, equipment and materials, but also so that these allies can gather intelligence.¹⁸

The material resources used by the allies evolved in line with the terrorist groups they had to combat, and the revival of warfare was mainly driven by the development of air forces, notably in Fallujah in 2004.¹⁹ This operation highlighted the importance of air power in urban warfare as a means of limiting damage.

Air warfare provides better support for forces on the ground, with non-stop aerial surveillance to locate and destroy terrorists, and rapid, precise strikes to limit intervention on the ground, as was the case with Operation Vigilant Resolve.

The most striking example is the drone war in the USA, where military operators operate in Afghanistan or Pakistan while physically in Las Vegas. This once again demonstrates the revival of warfare, with a transnational dimension to combat, casualties, and surveillance operations. As a result, the recent wars against Islamist terrorism and the evolution of the criminal psychology of terrorists, which consists in being discreet and blending in with the crowd, have led to

16 Hanon, Jean-Paul. (2004). “Militaires et lutte antiterroriste, cultures & conflits,” n°56, pp. 121–140.

17 Ochmanek, David. (2003). “Military operations against terrorist group abroad implication for the US Air Force,” RAND.

18 Ochmanek, David. (2003). “Military operations against terrorist group abroad implication for the US Air Force,” RAND.

19 Grant, Rebecca. (2005). “The Fallujah model,” *Air Force Magazine*, vol 88.

a strengthening of the relationship between land and air, which was not as strong before.²⁰ In addition to the development of airpower and firepower, the new wars are emphasizing the use of special forces for stealthy, targeted interventions requiring little logistics.

“When the enemy is united, divide him; and attack where he is unprepared, springing up when he is not expecting you,”²¹ is an admonition that is still relevant in the 21st century to describe the interventions of special forces in the fight against the adversary with the motto: “Do things differently.”

The history of special forces really began during the Second World War. Given the intensity of the conflict with the Nazis, Winston Churchill relied on the action of special forces, which were created by David Stirling in 1941²² for stealthy, undetected actions. Over the years, French Special Forces have become indispensable when armed conflicts arise.²³ Indeed, when a conflict arises in the Middle East or the Sahel, it has to be “nipped in the bud” and a rise in insecurity avoided by limiting and managing the consequences. However, conventional armed forces are unable to intervene rapidly, as their deployment—particularly in terms of logistics—is costly, time-consuming and requires political approval, whereas SF intervention is rapid and stealthy. It’s easier to deploy a handful of men who have been trained to operate in any theater of operations, regardless of the enemy, and who can adapt to any situation, any geographical relief, any criminal psychology of the terrorists, than to deploy a whole contingent that will have to be trained according to the threat and the geopolitical context of the country in which they are to intervene.

According to the COS (special operations command), we have to adapt to the adversary and try to reduce the asymmetry that separates him from our counter-terrorism policy in order to reach him in his preferred area.²⁴

At present, the main objective of special forces is to create one-off strategic effects (leverage) against terrorist groups, i.e., to destabilize them, eliminate their leaders, destroy their infrastructures and weapons stockpiles, and affect them in order to weaken them, although they can also act clandestinely.²⁵

The adaptation of special forces to the criminal psychology of terrorists also concerns new technologies, such as cyber warfare, which special forces are

20 Grant Rebecca (2013), “Iraqi Freedom and the air force,” *Air Force Magazine*, vol 96.

21 Sun Tzu (5th century BC), *The Art of War*.

22 Senate information report (May 13, 2014), “Le renforcement des forces spéciales françaises, avenir de la guerre ou conséquence de la crise?” no. 525.

23 Delpit Michel (2020), “les forces spéciales” in: Fernandez Julian, Jeangène Vilmer Jean-Baptiste, “Les opérations extérieures de la France,” ed CNRS, pp. 99–138.

24 Bruyère-Ostells Walter (2022), “Le COS : Histoire des forces spéciales françaises,” ed Perrin.

25 Delpit Michel (2020), “les forces spéciales,” in : Fernandez Julian, Jeangène Vilmer Jean-Baptiste, “Les opérations extérieures de la France,” ed CNRS, pp. 99–138.

training to use, but adaptability also results from the countries of intervention, the missions ... As a result, terrorist groups will have an influence on army OPEX and therefore on special forces interventions, and special forces will have an influence on terrorist groups, as their interventions will push them into their entrenchments and force them to reinvent and reorganize themselves. A feeling of disorder will spread within the terrorist group, which could push them to commit a mistake that could benefit conventional forces.

When talking about Islamist terrorist groups, it's important to distinguish between groups in the Middle East and those in the Sahel. Indeed, their psychology and means of achieving their ends are not the same, particularly in the case of the Boko Haram terrorist group, which favors terrorist bomb attacks.²⁶

Unlike other terrorist groups in the Middle East, whose main aim is to expand a religious ideology worldwide, those in the Sahel are intent on expanding their territory, which explains why the fight against terrorism in the Sahel is spread over several countries, whereas Middle Eastern terrorists (EI, Taliban, etc.) are a little more focused on one area.

The ideology of groups in the Sahel is the desire to achieve an Islamic society (fundamentalist Islamism) with the rejection of Western modernity, whereas those of the Islamic State do not reject modernity because they will use it, but they reject Western values which are contrary to the Koran and therefore to Islam

In 2013, to counter the growing terrorist threat in Africa, French conventional forces were sent to the Sahel under Operation Serval, later replaced by Operation Barkhane. During these operations, the French military doctrine applied in the Middle East proved ineffective in combating terrorist groups in the Sahel.²⁷ Indeed, given the different ideology and means of attack of Middle Eastern terrorists, conventional forces had to change their strategy and adapt to the criminal psychology of Sahelian terrorists.

The criminal psychology of the terrorists in the Sahel will have a real influence on the French army's OPEX operations.

The complexity of these operations and of the criminal psychology of terrorists is demonstrated by the increasing use of special forces to combat terrorism in the Sahel, whereas in the Middle East, conventional forces are favored, as well as the use of air warfare to cover a large area of the Sahel.

Mali recently demonstrated the limits of counter-terrorism programs in Africa, with African units deciding to abandon training and the role of soldiers

26 Pérouse de Montclos Marc-Antoine (2012), "Boko Haram et le terrorisme islamiste en Nigeria: insurrection religieuse, contestation politique ou protestation sociale?" *Question de recherche*, n°40.

27 Charbonneau Bruno, Debos Marielle, Hanon Jean-Paul, Olsson Christian, & Wasinski Christophe (2021/3-4), "De la guerre contre le terrorisme aux guerres sans fins ; la coproduction de la violence en Afghanistan, au Mali et au Tchad," *Culture & Conflits*, n°123-124, pp. 67-82.

being called into question. These training missions may be carried out by private companies, whose presence could be “a brake” on the development of terrorism

The failure of the French army can be explained by the criminal psychology of terrorists, who prefer to fight over too large a territorial area to be fully covered by conventional forces, thus preventing an effective fight against terrorism. The Sahel’s terrorist groups cover five countries, but unlike the Middle East, the Sahel’s terrorists retain “the time, place and mode of confrontation,”²⁸ making allied forces dependent on technology and resources.²⁹

The criminal psychology of Sahelian terrorists is different, as they have fewer resources and are less confrontational with armed forces representing a weaker threat than Middle Eastern terrorists.³⁰ But this low threat is a veil over reality. Indeed, while local governments are rejecting the French army in favor of Russian mercenaries, and tearing themselves apart internally, the terrorists are taking advantage of the situation to develop, create new alliances, expand territorially and incubate an ever-growing threat.

Whereas terrorists are not bound by any rules, laws or doctrines, conventional armed forces must act in accordance with the doctrines laid down for OPEX. The principle of doctrine is that it evolves according to the context of operations, the threat, but also the terrorists to be fought and their psychological evolution (doctrine will not be the same for Islamist terrorists in the Middle East as for Islamist terrorists in the Sahel, even if, as we saw earlier, during the Serval and Barkhane missions the same doctrines were used, leading to the failure of French forces in the Sahel).

Military doctrine is based on feedback from past experience, as well as on military experiments that could enable us to anticipate the future. Good military doctrine means that the political objectives (the goal) and the military means to achieve it must be mutually dependent, as confirmed by Prussian theorist Carl Von Clausewitz.

After September 11, 2001, military doctrines in all countries evolved as threats changed. The Islamist terrorists of al-Qaeda had a new vision of war, but also of how to wage it, notably by externalizing the threat. Third-generation warfare is not based on a doctrine of firepower like second-generation warfare, but on a maneuver-oriented doctrine that takes into account today’s technological evolutions (evolutions included in army doctrine).

28 Fernandez Julian, and Jeangène Vilmer, Jean-Baptiste (2020), “Les opérations extérieures de la France,” CNRS edition.

29 Charbonneau Bruno (2017), “De Serval à Barkhane : les problèmes de la guerre contre le terrorisme au Sahel,” *Les temps modernes*, n°693-694, pp. 322–340.

30 Ochmanek David (2003), “Military operations against terrorist group abroad implication for the US air force,” RAND.

In 2007, in a document entitled “Winning the battle, leading the peace. Les forces terrestres dans les conflits aujourd’hui et demain,” French military doctrine highlights the changing face of war and its place in the world. This change (war is a chameleon, according to Clausewitz) is the result of the evolution of warfare and the criminal psychology of terrorists, who are not the same as they were yesterday, and the doctrine notes that “new forms of threat are emerging” (*FT-02, Emploi des forces armées et nouvelles conditions des opérations*)

With the changing face of warfare, and the evolving criminal psychology of terrorists, external operations are evolving into joint operations. To coordinate these operations, a Joint Center for Concepts, Doctrines, and Experiments was created in 2005.

In 2015, a report by the COS (Command of Special Operations) led to a change in French military doctrine in the fight against terrorism, with increased targeting of group leaders (find, track down, finish off, exploit) and interaction with the special forces of allied countries³¹ while remaining subject to and framed by international law. The use of special forces has proved particularly effective in the targeting doctrine with Task Force Sabre in the Sahel.

In the 21st century, wars are less and less high-intensity as they used to be, but they are becoming asymmetrical, meaning that the combat is unequal (a national army against a terrorist group).

But who benefits from this asymmetry? Terrorist groups, even if materially weaker, are still present, and in the end, state armed forces seem to be the weakest, particularly in terms of the fight against terrorism.³²

The evolution of OPEX and the psychology of terrorists will require an evolution of equipment in the fight against terrorism.

Today, in their fight against terrorism, soldiers are equipped with HK 416Fs with grenade launchers that adapt to the shooter’s morphology, and HK 416Ss for soldiers in OPEX (possible incorporation of a bayonet that can be useful for hand-to-hand combat, which corresponds to a new reality on the ground), whereas during the Second World War, they only had basic equipment such as MAS 36/ MAS 40 rifles.

What’s more, aircraft are becoming increasingly high-performance, with the Rafales F4.1, and pilots are equipped with Scorpion helmets featuring augmented reality, giving them direct knowledge of the tactical situation unfolding on the ground (Pod Talios) (Ministry of Defense, France).

But terrorists are much better equipped, taking advantage of the evolution

31 Bagayoko Niagalé (2024), (The French army in the Sahel: A doctrinal corpus put to the test, IFRI)

32 Leistedt Samuel J. (2013), “Behavioural aspects of terrorism,” *Forensic Science International*, vol 228, pp. 21–27.

of the weapons they receive from their “allies” or that they recover after the withdrawal of troops, notably during the American withdrawal from Afghanistan. The revival of these weapons can also be explained by changes in the psychology of terrorists, who are increasingly dangerous, better trained in engineering and therefore able to develop new, more powerful weapons themselves. For example, terrorists such as the Islamic State now use drones to monitor armed forces operating in their countries, as well as MANPADS³³ air defense systems, rocket-propelled grenades and mortars.

The advent of new technologies linked to AI and the evolution of connected objects (watches, etc.) will reshuffle the cards in the fight against terrorism, as they will enable terrorists to carry out large-scale attacks that could be coordinated with each other, leading to new terrorist “alliances” to carry out increasingly large-scale and spectacular attacks (*The world in 2040 as seen by the CIA*). But this also enables armed forces to develop new combat technology.

But the other side of the coin is that, in the hands of expert terrorists, the production of new, more powerful and more destructive weapons is likely to become a new threat to the armed forces.³⁴

Based on this necessary technological evolution, the American army developed AC-130 aircraft (as early as the Vietnam War), which are still used today, particularly for air support. In addition, various armies have used new air technologies to build “silent” helicopters, enabling infiltration and exfiltration of special forces, so that they can operate stealthily, undetected by terrorist groups—their main objective.

New sensors embedded in drones or aircraft are also being developed to track down terrorist groups among a multitude of people (such as the AN/APG-63 and AN/APG-70 radar systems, which can detect terrorists hiding under foliage, whereas before, terrorists knew that by hiding under foliage or wool blankets, they could not be detected) or in remote mountains to which ground forces have no access (due to a number of factors, including unfamiliarity with the area, which can result in an ambush for armed forces on the ground).

To this end, the United States Air Force has developed technologies such as the ROVER, a video receiver for remote image enhancement, and the technologies and functionalities of drones such as the MQ-9 Reaper, which has become a “hunter-killer” drone rather than just an intelligence drone.³⁵ What’s more, in its fight against terrorism, the U.S. Air Force has developed the HADES program (an outgrowth of the RAPCON-X program, which is an overhaul of digital approaches

33 Grant Rebecca (2013), “Iraqi freedom and the Air Force,” *Air Force Magazine*, vol 96, n°3.

34 Ochmanek David (2003), “Military operations against terrorist group abroad: Implication for the U.S. Air Force,” RAND.

35 Grant Rebecca (2013), “Iraqi freedom and the Air Force,” *Air Force Magazine*, vol 96, n°3.

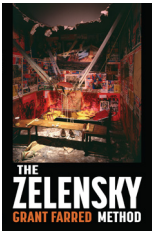
to best adapt to the needs of each mission), focused on surveillance, intelligence, and aerial reconnaissance to adapt to the changing psychology of terrorists

This adaptability of existing technologies is the result of the reality on the ground and the need for armed forces in OPEX to adapt to their adversaries, notably because the requirements are not the same in the fight against terrorism in the Middle East or Africa.

In conclusion, to be able to fight your enemy effectively, you need to study him, get to know him, put yourself in his shoes to counter him and anticipate his actions. By taking into account the criminal psychology of terrorists, we can better anticipate the threat and fight terrorism more effectively in OPEX. As well as having an influence on OPEX, the criminal psychology of terrorists also has an influence on the geopolitical landscape, as is the case with Russia's state-sponsored terrorism or Israel (the criminal psychology of terrorists has evolved, and now plays with the law and pushes victims into a corner in order to get them to commit crimes. In this way, Israel has gone from being a victim state to an executioner state, thanks solely to the influence of the criminal psychology of the terrorists, who were able to turn the situation to their advantage). Armies now have to evolve to stay several steps ahead of terrorists, even if, unfortunately, knowledge of the terrain and the ability of terrorists to hide within the population is a huge advantage over conventional armed forces. The question now is whether armies (conventional or non-conventional forces) will ever have a real influence on the criminal psychology of terrorists in order to annihilate them.

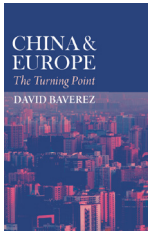


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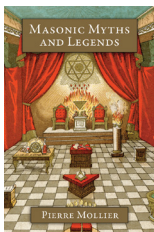
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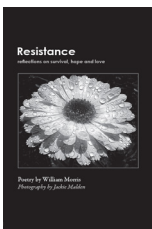
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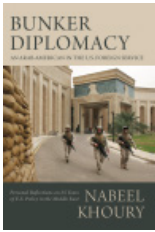
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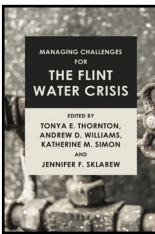
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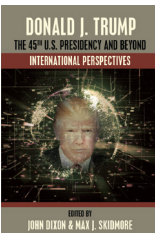
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After twenty-five years in the Foreign Service, Dr. Nabeel A. Khoury retired from the U.S. Department of State in 2013 with the rank of Minister Counselor. In his last overseas posting, Khoury served as deputy chief of mission at the U.S. embassy in Yemen (2004-2007).



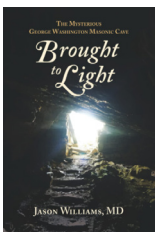
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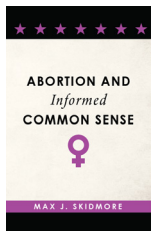
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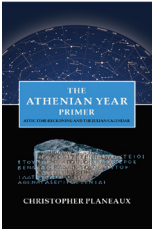
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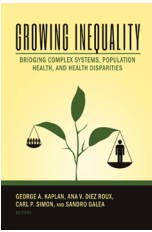
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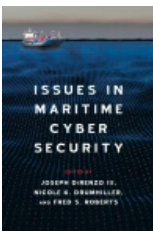
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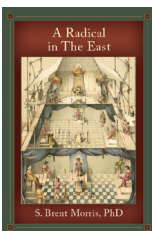
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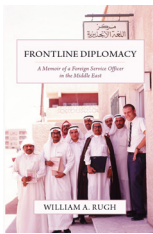
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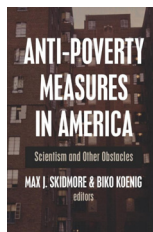
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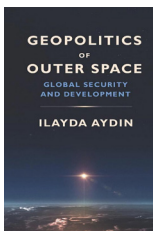
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