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Paper 029:  
**C2 in the Mafia**

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The Mob

## Abstract

Organized crime groups (“mafias”) such as the Sicilian *Cosa Nostra*, the Calabrian *'Ndrangheta*, and others appear to employ effective forms of command and control (C2), well suited to their missions. Studying criminal organizations is difficult because of their inherent secrecy. However, over the years, a body of information has been inferred by various investigators about the nature of such entities. We review some of this knowledge and analyze it through the lens of C2 theory. Most mafias are rigidly hierarchical at the clan level, but the purported hierarchy often overlays a much looser, entrepreneurial, and decentralized *de facto* network. A form of Mission Command is employed. The shared intent implicit in profit maximization and avoidance of apprehension serves as a fundamental motivator. The *de facto* allocation of decision rights is broadened by various considerations, including the need to isolate and contain the risk of apprehension, as well as the need for flexibility of action in the face of evolving circumstances. Patterns of interaction and distribution of information are constrained by apprehension risk. Mafias also perform varying degrees of collective C2, to coordinate the activities of various clans within the overall umbrella mafia and contain conflict between them. There is evidence that organizations practicing collective C2 at the appropriate level can outperform those whose clans operate too independently, or conversely are too constrained—and do so with less violence. This is shown, for example, by some cases where the *'Ndrangheta* has operated more effectively than the *Cosa Nostra* in expansion to new territories.

## 1. Introduction

In this paper we examine the command and control (C2) approaches employed by criminal organizations, at the clan level and collectively between clans. We limit our analysis to Italian mafias, and the homegrown version in New York. We use the word “mafia” in the generic sense, not limited to the original Sicilian Mafia, which we denote by the name *Cosa Nostra*.

Studying criminal organizations is difficult because of their inherent secrecy. However, over the years, a body of information has been inferred by various investigators about the nature of such entities, drawing on judicial documents, interviews with collaborators, and various data collected by law enforcement.<sup>1</sup> We review some of this knowledge and analyze it through the lens of C2 theory.

### 1.1 Differences from Legitimate Organizations

Criminal organizations differ from legitimate enterprises in a number of ways. They differ from civilian businesses and government agencies in that violence and the threat thereof are core parts of their operating model, and risk of apprehension by law enforcement is a constant factor with

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<sup>1</sup> The literature on criminal organizations is extensive and has a long history. Recent works consulted for this paper, which would serve as useful introductions include: Agreste et al. (2016); Calderoni (2012); Calderoni (2014); Calderoni et al. (2016); Catino (2014, 2015); Europol (2013); Morselli (2009); Scaglione (2016); and Serenata (2014). These works also contain extensive citations to earlier literature.

which they must contend. They differ from terrorist organizations in that their objectives are not ideological, but ultimately financial, and this often introduces a shorter time horizon.<sup>2</sup>

## 1.2 The Main Italian Mafias

There are three main Italian mafias, all of which have origins in the 19<sup>th</sup> Century: the Sicilian Mafia or *Cosa Nostra*, the Calabrian *'Ndrangheta*, and the Neapolitan *Camorra*. Their rough home territories are shown in Fig. 1. Fig. 1 also shows the rough home territory of the loose collection of “Apulian Mafias.” One of the Apulian Mafias, the *Sacra Corona Unita*, dates from 1 May 1983. It was founded in prison by Giuseppe Rogoli, and was heavily influenced by the structures and rituals of the *'Ndrangheta*.<sup>3</sup> Many investigators and media outlets use the term *Sacra Corona Unita* to denote all Apulian Mafias, but this is not accurate.

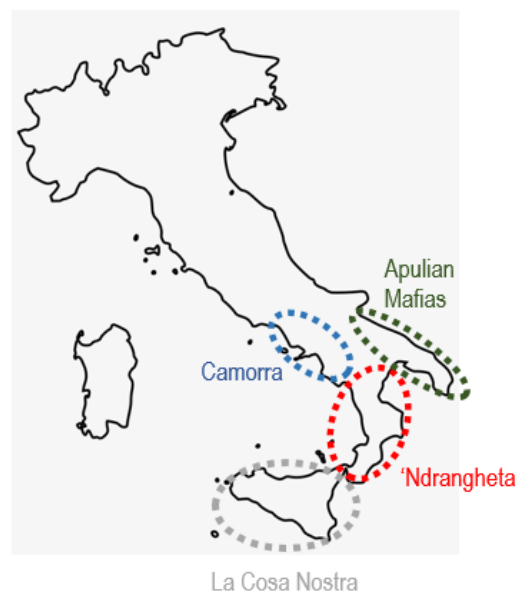


Figure 1. Home territories of four large Italian mafias

The Sicilian *Cosa Nostra* also has offshoots in the United States, dating from at least the early 20<sup>th</sup> Century. One of these offshoots is the New York Mafia, or New York Mob, with its famous “Five Families.” It is important to note that the New York Mob is not some sort of subsidiary of the Sicilian *Cosa Nostra*. It is an independent organization, although there have been continuing ties with Sicilian clans.

Table 1 summarizes basic information and educated conjectures about some mafias. The revenue estimates are those of Calderoni (2014), and are much lower than figures reported in the popular press, which can be ten times as high.<sup>4</sup> However, even these lower figures reveal organizations that are clearly achieving some degree of effectiveness.

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<sup>2</sup> Morselli (2009)

<sup>3</sup> Serenata (2014)

<sup>4</sup> Squires (2012)

Table 1. Various Mafias

	Number of Affiliates [1,2,3]	Number of Clans [2,3]	Estimated Annual Revenues, Billion Euro [4]	Number of Countries with some level of presence [5]	Number of significant cells outside Italy [6]
Camorra	6,700	99-109	3.1 - 4.7	44	
Ndrangheta	6,000	135 - 160	2.5 - 4	39	103
Cosa Nostra	5,500	101	1.4 - 2.3	37	36
Apulian Mafias	2,000	50	0.9 - 1.4	24	
New York Mafia	670-830	5 Families, comprising 15 factions			

## NOTES:

[1] Monella (2017); [2] FBI (2019); [3] Catino (2014);

[4] Calderoni (2014); [5] Calderoni et al. (2016); [6] d'Aquila (2014)

## 2. Mafia Organizations

The basic organizational unit in mafias is the clan. Mean clan size is typically on the order of 50 members, but there is considerable variation. In the *Ndrangheta* the clan is called a *ndrina*, while in the *Cosa Nostra* it is a *cosca* or “family.” In the New York Mob a clan corresponds roughly to a large faction within one of the Five Families. In the *Ndrangheta*, members of a *ndrina* are typically a literal family, related by blood and marriage. This increases the bonds of trust, and contributes to the *Ndrangheta*’s success. In other mafias, clan members are not necessarily linked by blood, and the notion of family is a fictive one.

Clans and their umbrella mafias have very strict codes of conduct.<sup>5</sup> Violation of such codes, especially those surrounding secrecy and non-collaboration with the authorities, can carry strict penalties up to and including death. However, we must remember that mafias are composed of criminals, who are not naturally inclined to follow rules. The rules sometimes yield to the evolving power dynamics within the organization and the exigencies of circumstance.

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<sup>5</sup> Catino (2015)

Within an overall mafia there may also be considerable collective governance of the activities involving multiple clans or families across many territories. This is discussed in Section 4. First, we consider activities within a clan.

### 3. Intra-Clan C2

#### 3.1 *De Jure* Hierarchy

Clans are generally rigidly hierarchical in structure. A clan typically has a boss with theoretically absolute authority, who is, or strives to be, the ultimate director of all criminal activity within the territory controlled by the clan. The boss of a *'ndrina* in the *'Ndrangheta* is known as the *capondrina* or *capobastone*. In the *Cosa Nostra* he may be known as a head of family or a *capo*, depending on the size of the clan. There may be formal or informal intermediate levels of hierarchy, again depending on the size of the clan. Some clan activity takes place in a strictly top-down manner, where the boss gives an order and it is transmitted down the hierarchy for “soldiers” to execute.

#### 3.2 *De Facto* Entrepreneurship

The tactical unit of action for a given criminal project is not necessarily composed of an entire clan. Smaller subunits composed of members and associates may carry out such activities, approved by the boss, but not directed in detail by the boss. The boss, in fact, may prefer ignorance of operational details, in order to help isolate himself from apprehension risk.

In his book *Wise Guy*, journalist Nicholas Pileggi conducted extensive interviews with Henry Hill, a Lucchese family associate in New York. Hill described several criminal operations in detail, including two major airport holdups: the Air France heist of 8 April 1967, and the Lufthansa heist of 11 December 1978. These were major thefts, grossing \$480,000 and \$5.9 million respectively, or \$3.7 Million and \$23 Million in 2019 money. Both operations involved small units of action, not exclusively composed of “family” associates. Both were bottom-up operations, entrepreneurially planned and executed. Air France involved only five criminals, including a prostitute hired as part of an elaborate plan to seduce a guard at the airport so that his key could be stolen and copied. Lufthansa involved about ten people.

##### 3.2.1 Allocation of Decision Rights and Mission Command

In both cases, the criminals had inside help, and were well informed about the details of the airport storage areas and the employees therein. They made snap decisions on the ground in response to evolving circumstances. The clan boss, Paul Vario, knew nothing of these details, and did not want to know: he was content to simply wait for his considerable cash tribute in the event of success. In other words, the tactical units of action in both these crimes enjoyed a considerable *de facto* allocation of decision rights, and operated in a manner similar to Mission Command.<sup>6</sup>

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<sup>6</sup> Mission Command (*Auftragstaktik*) is a doctrine, with roots extending back to the 19<sup>th</sup> Century Prussian army, that accords considerable leeway to subordinate officers in fulfilling the commander’s intent, and encourages individual initiative in the face of changing circumstances. See Vassiliou and Alberts (2017); Shamir (2011); Leistenschneider (2002).

In a study of *Ndrangheta* drug trafficking networks, Calderoni (2012) found that the networks developed their own market-driven organizations that did not correspond directly to *Ndrangheta* clan hierarchy. These cases do not present clear instances of Mission Command, but they do exhibit some *de facto* allocation of decision rights. This type of relative autonomy in drug networks was also noted by Natarajan et al. (2015).

### 3.2.1.2 Allocation of Decision Rights can be Unstable

We may note that in the criminal and potentially violent environment of a mafia clan, even a discreetly tolerated *de facto* allocation of decision rights for operational purposes can be unstable and can spark conflict. A group acting with too much autonomy within a clan can threaten the hierarchy and cause suspicions—which may be entirely founded—that the group is trying to break away from the clan or take it over. Saviano (2007) recounts one such situation in the *Camorra*'s Di Lauro clan:

But in the Di Lauro clan, freedom is given; you cannot presume to own it. In 1992 the old rulers resolved the schism sparked by Antonio Rocco, head of Mugnano, by entering the Fulmine bar armed with submachine guns and hand grenades. They killed five people.<sup>7</sup>

### 3.2.2. Patterns of Interaction and Information Distribution

In the New York Air France and Lufthansa heists mentioned above, members of the executing criminal teams interacted relatively freely with one another and shared necessary information, but there was no interaction with the clan boss beyond the initial approval and the subsequent rendering of tribute. Even within the unit of action, members only interacted when strictly necessary, and shared only the most necessary and relevant information for the operation. The constant risk of apprehension limited their ability and willingness to interact and share information with one another and with those who might help them. As Henry Hill puts it, “Knowing what's not necessary is only trouble.”<sup>8</sup>

Henry Hill describes boss Paul Vario as severely limiting his own interaction patterns and information exchange. He eschewed the use of telephones, employing only face-to-face meetings with limited numbers of people and severely circumscribed information flows.

“[...] for a guy who traveled all day and all night and ran as much as he did, Paulie didn't talk to six people. If there was a problem with the policy game, for instance, the dispute was presented to Steve DePasquale, who ran the numbers game for Paul. Then, in the morning, when Paulie met Steve, he would tell Paul what the problem was, and Paul would tell Steve what to do. Most of the time Paul just listened to what Steve said, because Steve really knew the numbers business better than Paul. Then he'd tell Steve to take care of it. If there was a beef over the crap games, he'd talk to his brother Babe. Union things would be referred to the union guys, whoever they happened to be, depending upon the specific unions and the kind of dispute. Everything was broken down to the lowest common denominator. Everything was one on one. Paulie didn't believe in conferences. He

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<sup>7</sup> Saviano (2007) pp. 78-79.

<sup>8</sup> Pileggi (1985) Chapter 16.

didn't want anyone hearing what he said, and he didn't even want anyone listening to what he was being told.”<sup>9</sup>

In the ‘*Ndrangheta* drug trafficking networks studied by Calderoni (2012), there were similar limits on interaction patterns and information distribution driven by the need to manage apprehension risk. Both networks showed a clear division of labor between drug traffickers, who found the drugs internationally and imported them into Italy; buyers, who bought from the traffickers; and an array of support criminals who performed such functions as transport and shielding fugitives. In both networks, the traffickers were at the core, with most information and interaction passing through them. In network parlance, they had very high betweenness centrality. Also, in both networks, the traffickers were not the highest status individuals in the ‘*Ndrangheta* clan hierarchy; those individuals remained in the background. Instead, the highly connected traffickers were individuals with moderate organizational status, and the removal of one of them would not result in severe repercussions to the clan.

### 3.3 Trust Dynamics

Somewhat paradoxically, criminal organizations must depend on bonds of trust to accomplish their missions. The paradox arises from the fact that criminals are not, by nature, very trustworthy. In military establishments employing Mission Command, the roots of trust are found in the shared intent, competence, training, and patriotism of the personnel. In criminal organizations, trust arises more from a shared desire to avoid apprehension, and from the very severe penalties that may come from violating the organization’s fundamental rules.<sup>10</sup>

The discussion above is summarized graphically in Figure 2, showing the notional location of inferred intraclan mafia C2 in the familiar C2 Approach Space.<sup>11</sup> The *de facto* broadening of decision rights is not accompanied by the concomitant broadening of interaction patterns and information distribution (a more “balanced” C2 approach<sup>12</sup>) that might otherwise increase effectiveness in a non-criminal undertaking.

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<sup>9</sup> Pileggi (1985), Chapter 4.

<sup>10</sup> Catino (2015)

<sup>11</sup> Alberts and Hayes (2006); Vassiliou et al. (2015)

<sup>12</sup> Vassiliou et al. (2015), Chapter 8.

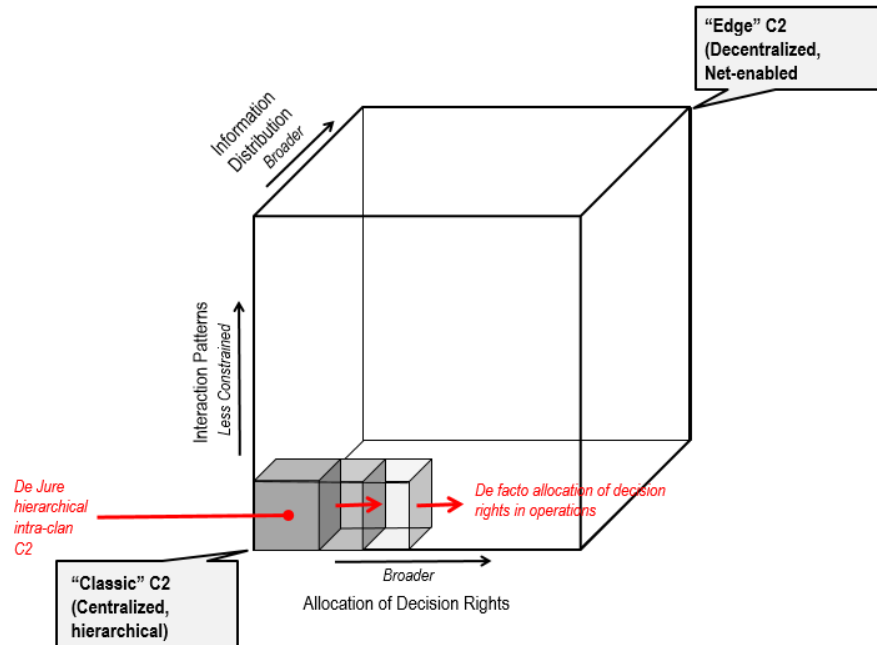


Figure 2. Inferred intra-clan mafia C2 in the C2 Approach Space. Positions are notional and not intended to be interpreted as precise. Adapted from Vassiliou and Alberts (2017).

## 4. Interclan Collective C2

In large mafias, there is sometimes a need for some degree of collective C2 to coordinate the activities of various clans. One of the most important purposes of such collective C2 is to control violence between clans, which is costly, counterproductive, and likely to draw unwanted new attention from law enforcement. Other purposes include pursuing large-scale criminal activity that might involve multiple clans and territories; sharing intelligence about common external enemies; and making collective strategic decisions affecting most or all the clans in the overall mafia. Italian mafias differ considerably in their collective C2 in pursuit of such objectives, and in the supra-local organizational apparatus employed to execute it.

### 4.1 Collective C2 in the ‘Ndrangheta

When the ‘Ndrangheta began in the 19<sup>th</sup> century, there was essentially no supra-local organization, and clans operated independently of each other, sometimes clashing violently. This situation persisted for over a century. For example, there was a destructive war between clans in 1985, sparked by the attempts of one clan to expand its territory, and various conflicts over who would control certain local contracts. The conflict spread to encompass large numbers of clans, and resulted in 700 deaths.<sup>13</sup>

The ‘Ndrangheta gradually introduced supra-local organizational structures to prevent and contain such conflicts, with considerable new organizational activity between the mid-1980s and early

<sup>13</sup> Catino (2014)



1990s. The first supralocal level to be introduced was the *locale*, an aggregation of two or more ‘*ndrine* (clans) in contiguous territories. A *locale* has a boss, known as a *capolocale* or a *capobastone*. The *capolocale* settles disputes between the ‘*ndrine* and provides overall strategic direction. He is supported by an “inner cabinet” including a *contabile* to manage finances, and a *crimine* to plan and oversee criminal activity. In 1991, the ‘*Ndrangheta* introduced the additional level of *mandamento*, consisting of several *locali*.<sup>14</sup>

One of the *mandamenti*, known as the *Provincia*, is supreme. The *Provincia* is headed by a *capo crimine*, who is the closest thing to the boss of the entire ‘*Ndrangheta*. However, he is not a boss in the same way a *capondrina* is the boss of his clan. Catino (2014) characterizes him as more of a “speaker of an assembly.” The individual clans of the ‘*Ndrangheta*, and especially the aggregated *locali*, still reign with considerable autonomy within their territories. The upper levels of management serve only to settle disputes and make decisions affecting the organization as a whole. For example, it appears that it was the *Capo Crimine* who, in 2008, ordered the elimination of a rogue local boss who tried to secede completely from the ‘*Ndrangheta*. He gave this order only after the various *mandamenti* reached consensus.<sup>15</sup> The *Provincia* also reportedly played a role in containing the potential retaliation from the 15 August 2007 Duisburg Massacre.<sup>16</sup> Members of one clan from San Luca on the Ionian coast of Calabria killed six members of a rival San Luca clan outside an Italian restaurant in Germany owned by the rival clan.<sup>17</sup> This brought increased attention from the German authorities, and retaliatory strikes would only have intensified the scrutiny.

The ‘*Ndrangheta*’s supralocal organization has been effective in overseeing an impressive global expansion. The *Cosa Nostra* was once the leader in global expansion among the Italian mafias, but now the ‘*Ndrangheta* is estimated to have 103 cells operating outside Italy compared to the *Cosa Nostra*’s 39 (see Table 1). The ‘*Ndrangheta*’s model has been to transplant the ‘*ndrina* structure abroad. Essentially, ‘*ndrine* in Calabria send blood relatives to establish ‘*ndrine* abroad, taking advantage of the inherent trust. The *Provincia* helps provide essential intelligence to the units abroad, and also oversees their business practices. The *Provincia* holds an annual meeting, one of whose purposes is to ensure financial transparency in the far-flung units. The *Cosa Nostra*, on the other hand, does not have these various coordinating mechanisms, and does not fully transplant cells, instead relying on sending emissaries.<sup>18</sup>

Overall, following the categorizations of NATO SAS-065,<sup>19</sup> the ‘*Ndrangheta* engages in collective C2 at a level ranging from De-Conflicted to Coordinated. De-Conflicted C2 involves entities interacting just enough, sharing just enough information, and giving up just enough decision rights to others to avoid negative impacts. Coordinated C2 involves entities linking their plans to some extent. The ‘*Ndrangheta* does not quite do this across the board, because not all objectives are shared among the various clans. However, it sometimes does coordinate intent and plans in

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<sup>14</sup> Catino (2014); Sciarrone (2014)

<sup>15</sup> D’Aquila (2014)

<sup>16</sup> D’Aquila (2014)

<sup>17</sup> Parini (2014)

<sup>18</sup> d’Aquila (2014)

<sup>19</sup> Alberts et al. (2010)

exceptional circumstances affecting the entire collective. This, it operates collectively at a level somewhere between De-Conflicted and Coordinated.

#### 4.2 Collective C2 in the Sicilian *Cosa Nostra*

At its origins in the mid-19<sup>th</sup> Century, the *Cosa Nostra* was largely a horizontal organization of independent clans. Its desire to consolidate and increase its power led it to add considerably more vertical structure, with a number of supralocal levels. Some families (clans) with adjoining territories began to organize into larger districts or *mandamenti*. The head of a *mandamento* was charged with coordinating criminal operations involving more than one family, and resolving disputes. Starting in 1957, district bosses in the various political provinces of Sicily began electing provincial representatives to perform these functions on a provincial level. By 1975 a Sicily-wide regional commission or *Cupola* was established, with representatives from each of the Sicilian provinces with *Cosa Nostra* operations.<sup>20</sup> Although the families retained autonomy on their territories, the higher levels up to and including the *Cupola* had considerable power, and forced a level of collective C2 that could be characterized as Coordinated, at least, and perhaps even Collaborative.

However, the centralization of power led to overreach and subsequent retrenchment. The *Cosa Nostra* became powerful enough to be able to order and execute high-profile assassinations. Two such events occurred in 1992: the Capaci bomb of 23 May, which killed Judge Giovanni Falcone; and the Palermo bomb of 19 July, which killed Judge Paolo Borsellino. Both were prominent anti-mafia judges who had scored major victories against organized crime. Both assassinations were ordered by *Cupola* boss Salvatore “Totò” Riina. The public outcry over these killings was tremendous and led to a major law-enforcement crackdown on the *Cosa Nostra*. Many bosses were arrested and imprisoned, and a number of mafiosi began collaborating with the authorities. In the wake of these measures, the *Cosa Nostra* fell back to a more horizontal structure, returning much more autonomy to the *mandamenti*. Information flows became more restricted, with communication between clans taking place less often, and more indirectly through brokers.<sup>21</sup> Collective C2 in the current *Cosa Nostra* has been mostly shorn of grandiose ambitions and has returned more to its traditional role of resolving disputes in order to limit violence. It is probably best characterized now as De-Conflicted C2.

#### 4.3 Collective C2 in the American Mafia

As we have stated above, the American Mafia is not a subsidiary of the Sicilian *Cosa Nostra*, but an independent assemblage of homegrown organizations with traditions originating in Sicily. The New York Mob with its “Five Families” is the most famous of these but it is not the only one. DellaPosta (2016) performed a valuable network analysis on the mid-20<sup>th</sup> Century American Mafia using law-enforcement data. He found a high degree of modularity in the network, with most interactions taking place within families or clans. However, he also found a considerable degree of inter-group interaction, suggesting some level of national-scale collective C2.

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<sup>20</sup> Catino (2014)

<sup>21</sup> Scaglione (2016)

Fig. 3, taken from DellaPosta’s paper, shows the bridging ties between families. As DellaPosta points out, the network exhibits a small-world structure with both high local clustering and low average path lengths. The former enables high security, while the latter allows some communication for purposes of coordination and efficiency. This does not give us enough information to categorize the nature of the collective C2, although the network in Fig. 3 would be consistent with the interactions taking place in De-Conflicted C2. There is some other evidence—for example Pileggi’s accounts<sup>22</sup> of the New York Mob—suggesting De-Conflicted C2. In the Air France and Lufthansa heists described in the sections above, the involved criminals paid tributes to highly placed members of rival families with claims on the territory of John F. Kennedy International Airport. There was clearly enough coordination between rival families to enable such conflict prevention measures. The American Mafia has apparently never achieved, or at least never wanted to exercise, the level of coordination and power required to carry out a high-profile assassination such as the killing of Judge Giovanni Falcone. Unless, that is, one believes the various theories that the American Mafia had a hand in the assassination of President Kennedy.<sup>23</sup>

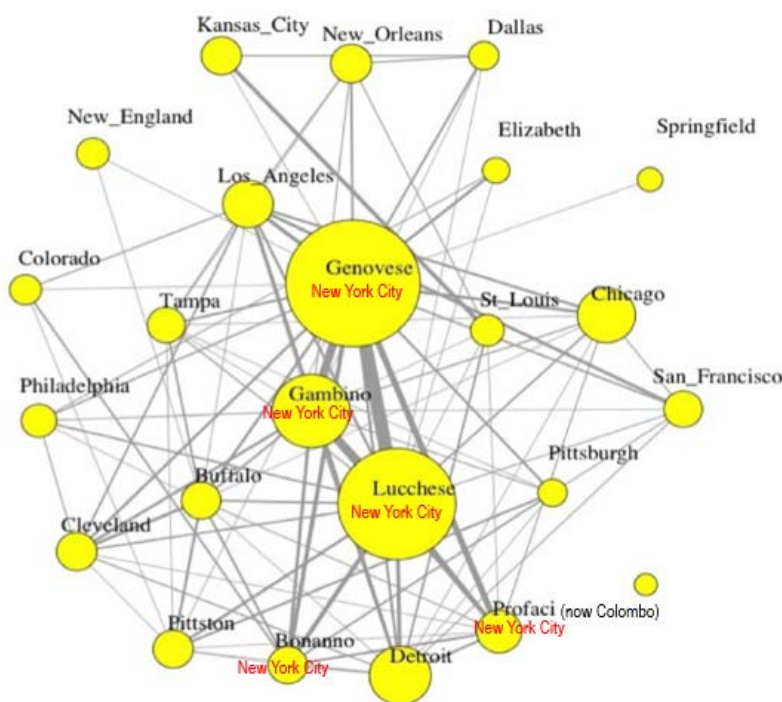


Figure 3. Network relationships in the mid-20<sup>th</sup> Century American Mafia. Adapted from DellaPosta (2016).

#### 4.4 Collective C2 in the *Camorra*

To first order, it is easy to characterize collective C2 in the *Camorra*: there isn’t any. In other words, there is a situation of Conflicted C2. The *Camorra* is a highly heterogeneous assemblage of often violently conflicting clans, each pursuing its own objectives more or less independently.

<sup>22</sup> Pileggi (1985)

<sup>23</sup> See, for example, Giancana et al. (2016)

Groups range from small, semi-organized violent street gangs on one end, to large, organized clans with rigid internal hierarchies on the other, and many types in between.

Catino (2014) estimates that about 70 per cent of *Camorra* clans operate alone, in perpetual conflict with neighboring clans. About 20 per cent of the clans enter into agreements with other clans. These are typically unstable *ad hoc* alliances or non-aggression pacts. Catino puts the notorious Secondigliano Alliance in this category. Finally, the remaining tenth of the clans are in cartels or federations, with organizational structure and a degree of collaborative decision-making. Thus a small percentage of *Camorra* clans do engage in De-Conflicted or Coordinated collective C2.

It is worth noting that there have been attempts to institute unified decision making and collective C2 in the *Camorra* at large, but they have all failed. One such attempt to federate the clans was Raffaele Cutolo's *Nuova Camorra Organizzata* in the early 1970s. This resulted in a number of clans forming a temporary alliance whose main purpose was to oppose this attempt at unification, and ultimately in a violent conflict that led to 1,500 deaths.<sup>24</sup>

#### 4.5 Collective C2 in the Apulian Mafias

The Apulian mafias are, like the *Camorra*, a heterogeneous collection of criminal groups ranging from disorganized gangs to more structured clans. For a time, the *Sacra Corona Unita*,<sup>25</sup> a federation of ten to fifteen criminal clans from Southern Apulia, introduced a degree of collective C2. The *Sacra Corona Unita* attempted to imitate the '*Ndrangheta* in both organization and ritual, but ultimately did not have the '*Ndrangheta*'s staying power. It no longer exists as an organization or federation, although the name survives.<sup>26</sup> We have seen no evidence for any extensive collective C2 in the Apulian mafias.

The above discussion is summarized graphically in Figure 4, showing the notional positions of inferred inter-clan collective C2 in the NATO SAS-065 Approach Space<sup>27</sup> for collective endeavors.

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<sup>24</sup> Catino (2014).

<sup>25</sup> Massari (2014)

<sup>26</sup> Europol (2013)

<sup>27</sup> Alberts et al. (2010)

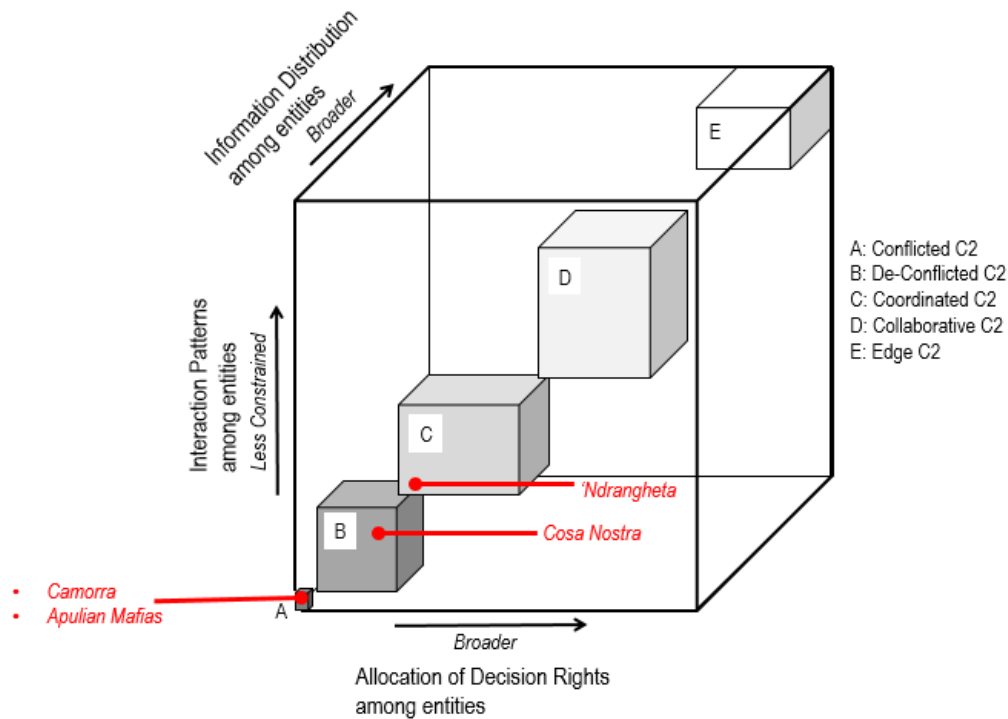


Figure 4. Inferred collective inter-clan mafia C2 in the NATO SAS-065 C2 Approach Space for collective endeavors.<sup>28</sup> Positions are notional and not intended to be interpreted as precise. Adapted from Vassiliou et al. (2015).

#### 4. Concluding Remarks

We may summarize our main observations as follows:

- In Italian and Italian-American mafias, the fundamental unit of organization is the clan, which controls criminal activity in a defined geographical territory. In the *'Ndrangheta*, clan members are related by blood, aiding that mafia in maintaining trust and resisting penetration.
- Generally, clans are rigidly hierarchical. Some intra-clan C2 is strictly top-down, with very limited allocation of decision rights, interaction patterns, and information distribution.
- Notwithstanding the rigid clan hierarchy, groups engaged in some criminal operations can be very entrepreneurial and enjoy a broad *de facto* allocation of decision rights. They can operate in a manner similar to Mission Command, although without the existence of a formal doctrine. The *de facto* allocation of decision rights is driven by the need for operational efficiency in the face of changing circumstances, and also to reduce apprehension risk for clan management. It is inherently unstable and can lead to conflict if a group within a clan is perceived as trying to amass too much power, secede, or take over the whole clan.

<sup>28</sup> Alberts et al. (2010)

- In order to prevent and contain violent conflict between clans, as well as to direct activities involving multiple clans, mafias have introduced supralocal levels of coordination and have engaged in collective C2. Collective C2 at the De-Conflicted level has been practiced successfully by the Sicilian *Cosa Nostra*, the American Mafia, and the Calabrian *'Ndrangheta*. The *'Ndrangheta's* collective C2 has also shown some features of Coordinated C2, and has generally been the most successful.
- The Neapolitan *Camorra* has not been successful in practicing collective C2, except for limited time periods or limited groupings. Its collective C2 is best described as Conflicted. The same appears to be true of the Apulian mafias.

### **Acknowledgement and Disclaimer**

This research was undertaken independently by the author with no institutional support or involvement. The opinions are the author's own, and do not necessarily represent those of the United States Government or any of the author's employers, past or present.

## References

Agreste, Santa, Salvatore Catanesea, Pasquale De Meo, Emilio Ferrara, and Giacomo Fiumara (2016). *Information Sciences* 351 (2016) 30-47.

Alberts, David S., and Richard E. Hayes (2006). *Understanding Command and Control*. Washington, DC: U.S. Department of Defense, Command and Control Research Program (CCRP Press).

Alberts, David S., Reiner K. Huber, and James Mo at (2010). *NATO NEC C2 Maturity Model*. Washington, DC: U.S. Department of Defense, Command and Control Research Program (CCRP Press).

Calderoni, Francesco (2012). The structure of drug trafficking mafias: the 'Ndrangheta and cocaine. *Crime Law Soc Change* (2012) 58:321-349.

Calderoni, Francesco (2014). Mythical numbers and the proceeds of organised crime: estimating mafia proceeds in Italy. *Global Crime*, 15:1-2, 138-163.

Calderoni, Francesco, Giulia Berlusconi, Lorella Garofalo, Luca Giommoni, and Federica Sarno (2016). The Italian mafias in the world: A systematic assessment of the mobility of criminal groups. *European Journal of Criminology* 13(4), pp. 413-433.

Catino, Maurizio (2014). How Do Mafias Organize? Conflict and Violence in Three Mafia Organizations. *European Journal of Sociology*, 55, 2 (2014), pp. 177-220.

Catino, Maurizio (2015). Mafia rules. The role of criminal codes in mafia organizations. *Scandinavian Journal of Management* 31 (2015) 536-548.

D'Aquila, William Gerald (2014). *An Organizational Explanation to the 'Ndrangheta's Meteoric International Rise*. Master's Thesis, Villanova University Department of Political Science.

DellaPosta, Daniel (2017). Network closure and integration in the mid-20th century American mafia. *Social Networks* 51 (2017) 148-157.

Europol (2013). *Threat Assessment: Italian Organised Crime*. The Hague: Europol Public Information. File No.: EDOC#667574 v8.

FBI (2019a). *New York's Five Families*. Washington, D.C.: U.S. Federal Bureau of Investigation. <https://www.fbi.gov/file-repository/mafia-family-tree.pdf>

FBI (2019b). *Transnational Organized Crime*. Washington, D.C.: U.S. Federal Bureau of Investigation. <https://www.fbi.gov/investigate/organized-crime>

Giancana, Sam, Chuck Giancana, and Bettina Giancana (2016). *Double Cross: The Explosive Inside Story of the Mobster Who Controlled America*. New York: Skyhorse. Updated edition of a book first published by Grand Central Publishing in 1992.

Leistenschneider, Stephan (2002). *Auftragstaktik im preußisch-deutschen Heer 1871 bis 1914*. Hamburg: E.S. Mittler and Sohn.

Massari, Monica (2014). *The Sacra Corona Unita: Origins, Characteristics, and Strategies*. Chapter 7 in Serenata, Nicoletta (2014) (Ed). *The 'Ndrangheta and Sacra Corona Unita: The History, Organization and Operations of Two Unknown Mafia Groups*. New York: Springer.

Monella, Lillo M. (2017). *Mapping the mafia: Italy's web of criminal gangs explained*. Euronews. <https://www.euronews.com/2017/11/22/mapping-the-mafia-italys-network-of-criminal-gangs-explained>

Morselli, Carlo (2009). *Inside Criminal Networks*. New York: Springer.

Natarajan, Mangai, Zanella, Marco; Yu, Christopher (2015). *Journal of Drug Issues* Vol. 45, Iss. 4: 409-430.

NATO (2013). *C2 Agility*. Technical Report STO-TR-SAS-085. Brussels, Belgium: North Atlantic Treaty Organization.  
[www.dodccrp.org/sas-085/sas-085\\_report\\_final.pdf](http://www.dodccrp.org/sas-085/sas-085_report_final.pdf)

Paoli, Letizia (2004). *Italian Organised Crime: Mafia Associations and Criminal Enterprises*. *Global Crime*, 6:1, 19-31.

Parini, Ercole Giap (2014). *'Ndrangheta. Multilevel Criminal System of Power and Economic Accumulation*. Chapter 4 in Serenata, Nicoletta (2014) (Ed). *The 'Ndrangheta and Sacra Corona Unita: The History, Organization and Operations of Two Unknown Mafia Groups*. New York: Springer.

Pileggi, Nicholas (1985). *Wise Guy: Life in a Mafia Family*. New York: Pocket Books (2010 Reissue).

Saviano, Roberto (2007). *Gomorra: A Personal Journey into the Violent International Empire of Naples' Organized Crime System*. Translated from the Italian by Virginia Jewiss. New York: Picador.

Scaglione, Attilio (2016). *Cosa Nostra and Camorra: illegal activities and organizational structures*, *Global Crime*, 17:1, 60-78.

Sciarrone, Rocco (2014). *'Ndrangheta: A Reticular Organization*. Chapter 6 in Serenata, Nicoletta (2014) (Ed). *The 'Ndrangheta and Sacra Corona Unita: The History, Organization and Operations of Two Unknown Mafia Groups*. New York: Springer.



Serenata, Nicoletta (2014) (Ed). The 'Ndrangheta and Sacra Corona Unita: The History, Organization and Operations of Two Unknown Mafia Groups. New York: Springer.

Shamir, Eitan (2011). Transforming Command: The Pursuit of Mission Command in the U.S., British, and Israeli Armies. Stanford, CA: Stanford University Press.

Squires, Nick (2012). Mafia is Italy's Biggest Business. The Telegraph, 10 January 2012.

Vassiliou, Marius, David S. Alberts, and Jonathan R. Agre (2015). "C2 Re-Envisioned: the Future of the Enterprise." New York: CRC Press.

Vassiliou, Marius, and David S. Alberts (2017). "Mission Command and Agile C2." Proc. 22nd International Command and Control Research and technology Symposium (ICCRTS).