Michael Kenney Penn State University

How "Narcs" and Narcos Learn: Competitive Adaptation[1]

Drug trafficking and counter-drug law enforcement resemble an endless game of "narcs" and *narcos*, in which law enforcers seek to identify, apprehend, and dismantle smuggling enterprises, while traffickers aim to elude or co-opt their sovereignty-bound competitors. These spirited dynamics feature adversarial, yet interdependent, players interacting in shared social systems. *Narcos* rely on narcs, and the drug prohibition regime they enforce, to artificially inflate prices and, hence, profits for the illicit commodities they trade. Narcs rely on *narcos* to serve as targets for drug enforcement operations, and to validate their existence to external stakeholders, which include Congress, the White House, and the American public. When law enforcers identify smuggling conspiracies for disruption, traffickers often react by changing their daily routines. When traffickers succeed in reducing the "heat" of drug enforcement by doing so, law enforcers must change their practices to keep up with their adversaries or seek new targets.

This paper highlights the interactive nature of *narco*-narc adaptation. Narcs and *narcos* learn not in isolation, but from each other. Colombian trafficking systems feature collections of cops and criminals that interact, acquire information about their competitors' from these interactions, and alter their behavior accordingly. Such learning is problematic, not automatic. Narcs and *narcos* find it difficult to learn due to the secretive nature of their activities and the hostile nature of their environment. To protect their operations from competitors, trafficking enterprises and law enforcement agencies organize their participants into different "compartments" and restrict information sharing on a need-to-know basis. While such practices may enhance operational security, they make it harder to learn from feedback and experience. Trafficking networks are particularly vulnerable to learning disabilities associated with compartmentation and informal organizational memories. But they also enjoy a number of advantages over their state competitors. These include stronger incentives to adapt, smaller coordination costs, flatter organizational structures, and fewer institutional impediments to action. These advantages influence, but do not determine, outcomes in competitive adaptation. Narcs can and do beat *narcos*, even as the larger trafficking system they populate proves relatively impervious to these ephemeral victories.

Understanding Competitive Adaptation

Information is the lifeblood of competitive adaptation. Narcs and *narcos* seek technical and experiential knowledge which allows them to accomplish organizational objectives, while out-maneuvering their opponents. They gather intelligence from a variety of sources, including informants, physical and electronic surveillance, government documents, and news reports. As they acquire techne and mētis, players modify existing practices and, less frequently, create new ones. Traffickers use their adaptations to slacken, or better still, sever connections to law enforcers in hot pursuit, while law enforcers use theirs to strengthen links to identified traffickers, improving their ability to disrupt active conspiracies. These interactions are fundamentally dynamic: tactics and strategies that work well during one period may perform

[1] This paper presents an abridged version of Chapter 4 in *From Pablo to Osama* (Pennsylvania State University Press, 2007) for participants in the Princeton workshop. I am happy to provide the complete version upon request.

poorly in others. This means the ability to change practices quickly in response to feedback and unforeseen events is essential for success. Players that fail to think fast and outfox their adversaries do not perform well in hostile trafficking systems.

Advantages of Information—and Force

In competitive adaptation, to paraphrase Gordon McCormick, drug traffickers initially enjoy an information advantage over law enforcers, while law enforcers enjoy a force advantage over traffickers.[2] *Narco*'s information advantage stems from the secretive nature of their trade and their need for less information to perform their activities, as compared with law enforcers. When smugglers decide to engage in criminal activity, they generally do so without the knowledge of law enforcers. Hence the initiative, and the early information advantage, belongs to *narcos*. Law enforcers cannot penetrate enterprises that have not identified, nor can they develop intelligence about unknown criminal acts prior to their commission. For this reason, they usually respond to criminal violations that have already occurred, often between willing accomplices that share a strong interest in shielding their activities from interlopers. While traffickers often do not know the identities and specific operating tactics of the law enforcers that target them, unlike their adversaries they do not need this information to perform their jobs, even if such intelligence would undoubtedly assist them.

Given their clandestine status, and law enforcers' tendency to concentrate their resources on criminal conspiracies they have already identified, traffickers often enjoy undisturbed and profitable dealings when beginning new criminal ventures… Traffickers know when, where, and how they are going to carry out a crime—law enforcers do not. This suggests that criminal investigators will not be able to resolve their information dilemma simply with the passage of time, but only by acquiring tactical intelligence regarding specific targets. As long as *narcos* remain below the radar screen of narcs, regardless of the amount of time that has passed since their illicit operations began, they will continue to conduct their activities largely free from state penetration.

Many trafficking groups enhance their information advantage by periodically changing their routines irrespective of law enforcement pressure, as described in Chapter 3. When law enforcers identify a "new" smuggling practice or technology, traffickers have often already moved on to different innovations…

Law enforcers seek to close the gap between their understanding of smuggling methods and what trafficking groups are actually doing. This requires the timely production and dissemination of tactical intelligence they can use to identify, track, and apprehend violators. "We try to stay one step ahead of the traffickers," explains a DEA official in Bogotá. "If we can intercept their communications, then we can be successful against them. We have to follow what they're doing. The hard part is figuring out what the Colombians are doing."[3]

---

[2] Gordon H. McCormick, "Terrorist Decision Making," *Annual Review of Political Science* 6 (2003): 484. While McCormick is concerned with strategic decision-making between terrorists and counter-terrorists, his insight is applicable to drug traffickers and law enforcers and other competitive interactions between states and clandestine non-state actors.

[3] Author interview with DEA official, Bogotá, Colombia, June 5, 2000.

On occasion law enforcers succeed, as evidenced by the disruption of several major trafficking conspiracies in recent years… However, once the Madrigal enterprise and other targets were removed from the trafficking system, law enforcers confronted a host of criminal conspiracies about which they knew next to nothing. For counter-drug agents, the cycle of competitive adaptation began all over again, this time against different *narcos* exploiting their own information advantage. Thus, the quest for real time, actionable intelligence remains a perennial challenge for counter-drug law enforcers. No matter how well narcs play the game, they often remain a step, or more, behind their illicit adversaries.

Fortunately for law enforcers, information represents only one side of the information-force asymmetry that characterizes *narco*-narc interactions. Armed with sophisticated surveillance technologies, professionally-trained agents, and other accoutrements of state power, many law enforcement agencies enjoy a significant capabilities-based advantage over their non-state adversaries. Notwithstanding periodic corruption scandals in the U.S. and Colombia, since the mid-1980s law enforcers from both countries have used their force advantage to capture and convict hundreds of traffickers, destroy thousands of drug processing labs and transportation vessels, seize tons of illegal drugs, and freeze millions of dollars in illicit assets.

One reason why law enforcers are able to exploit their force advantage is that the information advantage enjoyed by some traffickers tends to be fleeting. As *narco*-narc interactions proceed, traffickers' information advantage tends to decline, due to competing tensions between organizational growth and the need to maintain enterprise security. In drug smuggling, as in many areas of economic exchange, the ability to achieve satisfactory profits encourages additional transactions and commercial expansion. But for every new transaction undertaken, for every new conspirator, customer and node added to an existing group or network, traffickers increase their exposure to risk and uncertainty. This is particularly true in hostile environments where numerous law enforcement agencies aggressively target criminal enterprises. In these systems, illicit success invites a robust response from law enforcers that focus their superior resources on the largest, most well-known trafficking enterprises. Some trafficking groups seek to mitigate the liability of largeness by changing locations, compartmenting information and workers, modifying electronic signatures, and making other tactical adjustments to their daily operations. Other groups purposely limit the size and scope of their operations, discounting potential profits in favor of organizational integrity. In drug trafficking, small is often beautiful.

Co-Adaptation and Environmental Selection

When law enforcers confront traffickers that adapt in such fashion, they too must adjust their activities to remain in pursuit. As *narcos* change phone numbers and stash house locations, criminal investigators must update their surveillance affidavits or apply for roving wiretaps to keep their suspects under observation. When *narcos* alter their drug smuggling and money laundering schemes, law enforcers must gather intelligence about these new practices and technologies and devise effective counter-measures. In capitalizing on their force advantage, law enforcers remove some smugglers from the Colombian trafficking system, resulting in a victory—of sorts—for the state. Numerous traffickers, faced with the loss of large investments, the disruption of established trading routes, and the prosecution of leaders and key members, find

the environment too hostile to continue their activities. This is especially true of smaller groups with fewer resources to replace personnel, capital, and equipment captured by the state.

However, even the most successful law enforcement operations cause only temporary disruptions to the larger trafficking system. Police crackdowns tend to weed out individuals and groups that face the greatest exposure to drug enforcement. In Darwinian fashion, these targets either adapt to ecological stresses or find themselves selected out of the system, replaced by other individuals and groups, some of which—but not all—may be better organized and more accomplished. Depending on the extent of state penetration, some networks will survive setbacks by revamping their operations and replacing members with new recruits. When individual nodes are dismantled, leaders turn to other nodes that provide the same service or function for the inter-group network. Redundant nodes make for resilient networks. When network leaders are captured and incarcerated, they may arrange to continue their smuggling operations from behind bars. Alternatively, incarcerated "kingpins" may cede day-to-day managerial authority for the network to trusted associates by loaning or renting their routes to them, as described in Chapter 2. Surviving networks may emerge from law enforcement crackdowns a little smarter from the wear and tear, extrapolating lessons from mistakes and modifying their operations accordingly.

Other groups may benefit from the removal of their competitors without absorbing any lessons from their experience. Rather than being sharper than their predecessors, these enterprises fortuitously enjoy another advantage in competitive adaptation: they are unknown to law enforcers. While targeted *narcos* face significant environmental pressures to adapt or die, survival in hostile trafficking systems does not necessarily demonstrate optimality in form and function. Some individuals and groups slip through the drug enforcement net as police agencies focus limited resources on targets they have already identified. Hence, the selection processes at work in competitive adaptation do not inevitably yield more efficient, or more sophisticated, criminals. Many *narcos* survive hostile trafficking systems merely because they are lesser known to law enforcers.

Compartmentation as an Impediment to Learning

To maintain the integrity of their operations, protect associates from unnecessary risk, and prevent competitors from exploiting their proprietary tricks of the trade, narcs and *narcos* channel communication flows into separate "compartments," where information is distributed on a need-to-know basis. While secrecy is often necessary for trafficking groups and law enforcement agencies, sequestering information in functional or geographic compartments that maintain little contact with other parts of the organization limits their ability to learn from experience.

This dilemma is particularly acute for clandestine smuggling networks that operate in hostile trafficking systems. Over the years Colombian trafficking enterprises have developed numerous innovations in their transportation, distribution, and money laundering practices. These adaptations are essential for helping *narcos* maintain their competitive advantage over government adversaries. But innovations developed in one part of the network are unlikely to spread to other nodes that may benefit, unless the information they contain moves through interconnected links. Such links are provided by transportation coordinators that communicate

regularly with different cell managers, brokers that facilitate transactions between different nodes, and other intermediaries. Many trafficking operations rely on these go-betweens or "cut-outs" to communicate valuable information about smuggling practices and law enforcement techniques to different cells. This is often done informally, as described in Chapter 3, through social gatherings that provide opportunities for intermediaries and associates from different nodes and networks to swap stories and share trade secrets.

Still, some trafficking networks are so tightly compartmented that they do not benefit from such connectivity. In these inter-group networks, learning tends to remain localized: individual cells absorb only those lessons they have experienced directly, as opposed to receiving valuable feedback from other nodes in the network. To the extent that learning occurs, it never becomes truly organizational. Knowledge does not spread through the network, and different cells end up learning the same lessons their colleagues in other nodes have already experienced. Moreover, because participants are told only what they need to know to carry out their immediate activities, they lack information about the overall enterprise, limiting their ability to suggest improvements to existing practices.

Compartmentation not only prevents trafficking networks from sharing knowledge about smuggling innovations, it also prevents them from communicating tips about police activities, playing into the hands of law enforcers. In highly compartmented operations, participants in one node will not be able to warn their colleagues in other parts of the network about law enforcement crackdowns because there are no intermediaries to pass along the information. The failure to communicate can also become a hindrance in less compartmented operations, where tactical intelligence about police activities could be shared but isn't. In one conspiracy investigation targeting a Colombian trafficking network, law enforcers were able to seize drugs from different wholesalers on several occasions without scaring off their primary target, a large-scale cocaine importer, because the wholesalers refused to share their unfortunate, if seemingly relevant, news with the importer, for fear of losing access to his prodigious drug supply. Case agents exploited this vulnerability by developing linkages to other nodes in the network they targeted for additional investigation, expanding the range of their investigation.[4]

Narcos are not the only players in competitive adaptation that compartment information and employees. Law enforcers also segment their operations and limit information sharing on a need-to-know basis. The DEA and other police bureaus divide their agents into different work units, organized along functional and regional areas of expertise. While drug enforcers are not formally prohibited from communicating with their colleagues from other units and agencies, most interaction and information sharing takes place within units, where agents develop strong inter-personal bonds and cohesive organizational subcultures. This can impede information sharing when law enforcers, whose professional identities are largely defined by their agency and unit, believe that they will harm the interests of their organization by doing so. In addition, agents follow numerous classification procedures when performing their activities, restricting their access to information they are not authorized to see and limiting their ability to learn from the knowledge-based artifacts maintained by their agencies. Law enforcers exacerbate these formal constraints by engaging in informal practices that further limit information sharing. For

[4] Author interview with DEA Resident Agent in Charge, Los Angeles Field Division, Los Angeles, California, 29 April 2003.

example, agents often maintain tactical intelligence from specific investigations in off-line case files, rather than entering this information into computerized databases that other agents and agencies can access—and exploit.

The Survival Imperative

Outside of warfare, and counter-terrorism, it is difficult to imagine a more hostile social system than the one shared by narcs and *narcos*. The purpose of law enforcement agencies such as the DEA and the Colombian National Police is to identify, disrupt, and destroy trafficking conspiracies. Special units and inter-agency networks in the U.S. and Colombia target alleged smugglers through physical and electronic surveillance, satellite imagery, undercover operations, and direct action raids. Law enforcers monitor traffickers' phone calls, flip their associates, search their properties, burn their processing labs, seize their drug shipments, freeze their assets, capture their members, and, in extreme cases, hunt them down and kill them. The force advantage enjoyed by well-equipped, highly-trained narcs provides *narcos* with a clear and pressing incentive to adapt: their survival as criminal enterprises depends on it.

For drug enforcement agencies, the stakes of competitive adaptation are not so high, nor the incentives to keep up with felonious Joneses so unambiguous. To survive, agencies must secure sufficient funding to carry out their programs. This depends more on responding to shifting winds in domestic politics and maintaining fruitful relations with policy makers that control government purse strings than responding to the latest trends in drug trafficking…

Survival for the DEA and the Colombian National Police remains all but assured, as long as both countries continue to follow prohibitionist drug policies—and have drug traffickers to chase… The symbiotic relationship between drug trafficking and counter-drug law enforcement further clouds the incentive structure for police agencies. As traffickers depend on prohibitionist policies to boost the value of their illicit commodities, so law enforcers depend on traffickers to channel their activities. If drug enforcement agencies somehow managed to eliminate drug production and trafficking in their respective countries, they would also remove their *raison d'état*. Without *narcos* to dismantle, narcs would have no formal reason to exist…

Should the Colombian police and military eventually succeed in pushing the drug trade out of Colombia, as they currently aim to do, they are likely to lose substantial funding, training, and other material assistance as policy makers direct limited government resources elsewhere. Colombian law enforcers understand this dilemma, along with its budgetary implications for their agencies. "If the Colombian police are too successful and wipe out all the *narcos*," explains a top official in the intelligence branch of the Colombian National Police, "they will end up hurting themselves because their budget will get cut."[5] As this official suggests, law enforcers in Colombia confront competing pressures to demonstrate proficiency against individual targets, such as the Medellín and Cali "cartels," without destroying the overarching trade that, in effect, keeps them working. However unlikely the complete elimination of the Colombian drug trade may be, what matters here is the *perception* among law enforcers that it could be, if they and the policy makers that allocate their budgets were to devote sufficient resources to the anti-drug

[5] Author interview with official, Intelligence Center, Colombian National Police, Bogotá, Colombia, 14 June 2000.

effort. To the extent that such attitudes are widely shared, they foster complacency and cynicism among law enforcers, undermining their commitment to winning the war on drugs.

Smaller in Size, Flatter in Structure

Players that process information and make decisions faster than their opponents enjoy a formidable advantage in competitive adaptation. To counter their adversaries' latest maneuvers with effective adaptations of their own, traffickers and law enforcers must gather, interpret and apply information—quickly and reliably. Research by organization theorists suggests that numerous factors influence decision cycles in organizations, including size, the number of management layers, and the degree of administrative centralization. Other things being equal, organizations with fewer (but sufficient) participants, flatter authority structures, and decentralized decision rules tend to make decisions more rapidly than those that combine tall administrative hierarchies with centralized decision protocols.

U.S. and Colombian law enforcers work in large bureaucracies containing numerous management layers and cumbersome decision protocols. The DEA has more than nine thousand employees organized in different divisions and field offices. The agency's chief executive is the Administrator, who oversees six administrative divisions, twenty domestic field divisions, and eighty foreign offices located in fifty-eight countries… From top to bottom, eight management levels separate the DEA's chief executive in Washington from its street-level narcotics agents in Colombia. The Colombian National Police is similarly big and bureaucratic…

Compared to these bureaucratic behemoths, Colombian trafficking enterprises are small and organizationally flat. Many trafficking operations can be conceived as inter-group wheel or chain networks, with different nodes that perform specific tasks, such as international transportation and wholesale distribution. Cells often contain less than a dozen members, and even large wheel networks generally have fewer than a hundred people working directly in drug trafficking. Each cell is led by a manager who supervises several workers; some larger cells also contain one or more assistant managers. Cell managers may report to an exportation manager, an intermediary, or, in some cases, directly to network leaders. Some bosses, such as Miguel Rodríguez Orejuela, prefer to concentrate decision-making authority in their hands, which has the potential to slow down decision cycles, particularly when the boss insists on having the final say in most operational decisions. However, even the largest networks contain only three or four management layers, ameliorating—but not eliminating—this centralization effect. Yet, many wheel networks are not led by micro-managers. In these enterprises cell managers enjoy significant decision-making authority. As revealed in Chapter 2, law enforcement crackdowns against the Medellín and Cali networks in the 1990s led to the formation of smaller, more loosely coupled chain networks composed of independent groups that coordinate their transactions on an *ad hoc* basis. Many of these enterprises contain only a single manager—the boss—assisted by a handful of subordinates.

With their smaller size and flatter structures, smuggling enterprises tend to process information and make decisions faster than law enforcement agencies. In trafficking networks, information flows through fewer channels, reducing the number of administrative bottlenecks that can slow decision-making. Flat decision-making hierarchies also limit opportunities for distorting

information because there are fewer managers that, whether due to human fallibility or self-interest, may manipulate, misplace, or withhold information from superiors and subordinates, or leak it to external competitors. Whether they contain three or four levels of management, Colombian trafficking networks enjoy a flatness advantage over their state adversaries. Leaders' decisions are communicated quickly to cell managers and through them to cell workers, allowing the network to change its behavior rapidly, an essential attribute for organizations in hostile trafficking systems…

Comparable decisions in law enforcement agencies often take days or weeks to proceed through the bureaucratic chain of command before obtaining approval from all the requisite officials… During criminal investigations, agents must run basic operational decisions by their supervisor, including whether to use electronic surveillance, carry out a controlled delivery, or allow a confidential informant to work undercover. In some cases, the supervisor may then consult with his boss, who checks with his boss, and so on. Each step of the way, decisions may be delayed or impeded by mistakes, personal conflicts between participants, bureaucratic politics, or more urgent concerns…

Approval for wiretaps can take months to complete, during which time traffickers continue their illegal activities, changing phone numbers and stash houses identified in the original affidavit. When smugglers change their phone numbers, law enforcers—assuming they are even privy to the new information—must update their affidavits, which again requires the consent of their superiors and a magistrate's formal sanction. In this manner, traffickers can slow criminal investigations to a crawl merely by changing their operational signatures on a regular basis, forcing law enforcers to revisit cumbersome electronic surveillance protocols…

The Red Tape Trap

While traffickers operate outside the rule of law, law enforcers work within it, exposing them to legalistic and bureaucratic constraints their sovereignty-free competitors avoid. "We have laws and rules that we have to abide by," emphasizes one DEA manager. "We're regulated by rules and policies set from above. Our agents have a lot of discretion, but we have to follow rules, too."[6] Indeed, law enforcers carry out their daily activities within complex institutional frameworks characterized by a variety of Constitutional laws, criminal statutes, and bureaucratic regulations.

To search alleged drug violators without their consent, or to seize their property, law enforcers must have "probable cause" that the suspect has committed a crime. Otherwise, they must obtain a valid search warrant from a magistrate or judge demonstrating probable cause of a criminal act and specifying, as the Fourth Amendment stipulates, "the place to be searched, and the persons or things to be seized." Likewise, to raid suspected drug labs, law enforcers usually need a search warrant demonstrating probable cause of a criminal violation…

Bureaucratic rules and procedures regulate other areas of counter-drug law enforcement as well. To purchase equipment for criminal investigations, DEA agents must illustrate their need for the technology to supervisors, submit the necessary request forms, and wait for approval… For all of

[6] Author interview with DEA official, Bogotá, Colombia, 13 April 2000.

these activities, and many more—handling evidence, managing informants, interrogating suspects, working undercover, extraditing suspects—law enforcers follow numerous rules and procedures that impose strict limits on what they can and cannot do.

Drug traffickers lack equivalent constraints. When *narcos* require information about law enforcers they hire outside consultants or assign participants to collect it. When they need equipment for their activities, they research the technology they want and they buy it. When they wish to interrogate suspicious associates or search their belongings, they assign their henchmen to the task. When associates perform poorly or threaten the integrity of the enterprise, they remove them from the operation, by force if necessary…

The informal structure of smuggling networks allows a degree of institutional permissibility and flexibility their government adversaries do not enjoy. Whereas drug traffickers are often free to adapt existing rules to meet their daily demands, provided their creativity does not place the enterprise in jeopardy, law enforcers work within "more established and bureaucratized" settings, where they "face a variety of formal and informal sanctions if they are too unorthodox."[7]

Before lamenting this arrangement, we should remember that Constitutional safeguards, criminal laws, and bureaucratic procedures regulating contemporary law enforcement arose over several centuries of development in Western jurisprudence and democratic institutions. Their purpose is both noble and necessary: to protect citizens' political rights and civil liberties and hold authorities accountable to the rule of law. These rights and protections are indispensable features of contemporary liberal democratic states—and I am not, tacitly or otherwise, endorsing their abolition. But as important as these legal and bureaucratic constraints are to healthy functioning democracies, a focus on competitive adaptation illustrates how the regulatory regimes governing narcs confer indirect benefits on *narcos*. "There are norms and parameters the police have to obey, which isn't necessarily bad," explains a Colombian official, "but when the competitor doesn't have to obey them, he has the advantage."[8]

Conclusion

Narcs and *narcos* learn not in isolation, but through interaction. Competitive adaptation provides one way of thinking about these interactions, illustrating how interdependent, imperfectly informed players gather information about their adversaries and change their practices in response to what they learn. Given the hostile, dynamic nature of Colombian trafficking systems, players that respond quickly to unforeseen circumstances tend to perform well in competitive adaptation. But such adaptations are easier said, and studied, than done. For one thing, *narco*-narc interactions are embedded in secrecy, making it difficult for players to learn about their competitors. The clandestine nature of drug trafficking is especially problematic for law enforcers because, unlike *narcos*, they need precise tactical intelligence about their adversaries—names, dates, phone numbers—to perform their activities effectively. But if *narcos*

[7] Nicholas Dorn and Nigel South, "Drug Markets and Law Enforcement," *British Journal of Criminology* 30, no. 2 (Spring 1990): 172.
[8] Author interview with official, Department of National Planning, Bogotá, Colombia, 27 June 2000 (my translation).

benefit from an information advantage over narcs, the state enjoys a compelling force advantage over traffickers. Belying hyperbolic media accounts, even the most sophisticated trafficking enterprises, such as the Cali wheel networks, cannot match the material and logistical capabilities of the DEA and the Colombian National Police. The primary challenge for law enforcers in competitive adaptation is to translate their force advantage into an information advantage by intercepting traffickers' most sensitive communications and gathering real time intelligence on impending transactions. Even when law enforcers succeed in doing so, effectively removing one player from the Colombian trafficking system, they confront numerous *narcos* about which they know very little, forcing them to begin the competitive adaptation struggle anew, this time against less familiar foes.

Narcos confront their own challenges to learning. These include compartmented operations that limit information sharing across trafficking networks, informal knowledge-based artifacts that store sensitive details in error-prone human memories, and the covert nature of criminal investigations, which creates information uncertainty for smuggling groups that have been targeted for disruption. Some trafficking networks are so tightly compartmented, or manage their collective knowledge so poorly, that they lack the connectivity needed for network learning. In these enterprises, learning, if it occurs at all, tends to remain localized, with different cells processing only those lessons they have experienced directly. Poor learners face significant vulnerabilities from experienced law enforcers that exploit traffickers' lack of information sharing to their advantage. However, such highly compartmented networks more likely the exception rather than the norm, due to the informal spread of smuggling mētis among like-minded practitioners from different groups and networks, and the role intermediaries play in maintaining connectivity between different nodes and networks.

Law enforcers confront even greater obstacles to the sort of rapid organizational learning that is essential in competitive adaptation. These include tall and centralized authority structures that slow decision cycles and organizational action, inter-agency coordination problems that further complicate, and decelerate, decision processes, comprehensive bureaucratic and legalistic constraints to action, and ambiguous incentive structures that undermine some agents' willingness to share information—and perhaps others' commitment to winning the war on drugs. In view of these limitations, it is not surprising that many agile trafficking networks process information, make decisions, and change practices faster than their bureaucratic rivals. Yet, these factors do not determine outcomes in competitive adaptation. There are times when law enforcers exploit their force advantage to overwhelm their illicit adversaries, as exemplified in several law enforcement crackdowns in Colombia during the 1990s. But the combination of factors often tilts the playing field in favor of *narcos*, many of whom extend their information advantage over law enforcers simply by changing their activities and operational signatures on a regular basis. With the promise of prodigious profits and pressing incentives to "adapt or die" driving them on, these criminal networks are poised to survive even the most hostile trafficking systems.