

ORGANIZED CRIME AND THE TRAFFICKING OF RADIOLOGICAL MATERIALS

The Case of Georgia

Alexander Kupatadze

Based on unique empirical data, including interviews with smugglers of radiological materials and the investigators who track them, this article discusses nuclear smuggling trends in the former Soviet republic of Georgia. Smuggling in Georgia mainly involves opportunist smugglers and amateurs, as opposed to professional criminals and terrorists; however, this does not mean that radiological smuggling is devoid of professionalism or organization. The article demonstrates that professional criminals are rarely involved in smuggling due to the unreliable nature of the market for radiological materials and the threat radiological smuggling could pose to professional criminals' ability to wield political power and operate legal commercial enterprises.

KEYWORDS: Radiological trafficking; Georgia; fissile materials; organized crime; former Soviet Union

Recent discussions of the trafficking of radiological materials have tended to misconstrue and exaggerate the threat.¹ Journalists, as well as some academics, speak loosely about the supposed "crime-terror nexus" involved in radiological trafficking and about the global market in nuclear materials.² While some analyses are exaggerated, terrorist groups and some unscrupulous states have attempted to exploit unsecured nuclear materials. This poses a threat because enough highly enriched uranium (HEU) and weapon-grade plutonium remain in the world to build tens of thousands of nuclear weapons; this does not include lower-level radiological material that is kept, often less securely, in research and other facilities.³ Russia in particular remains the host of one of the largest stockpiles of weapons-usable materials.⁴ Speaking in Prague on April 4, 2009, President Barack Obama announced an initiative to secure "all vulnerable nuclear material around the world within four years." The crucial element of the plan is "expanding cooperation with Russia" in order to mitigate this "most immediate and extreme threat to global security."⁵ Indeed, most cases of trafficking in weapon-grade nuclear materials have been related to Russia, which remains a major source of unsecured radioactive substances. To date, roughly 38 kilograms (kg) of weapons-usable material are either known or suspected of having been diverted from nuclear facilities in Russia.⁶ Some of these materials have left Russia on their way to buyers via Georgia, which, in its position between Russia and the Middle East, sits in

Nonproliferation Review, Vol. 17, No. 2, July 2010

ISSN 1073-6700 print/ISSN 1746-1766 online/10/020219-16

© 2010 Monterey Institute of International Studies, James Martin Center for Nonproliferation Studies

DOI: 10.1080/10736700.2010.485425

an important geopolitical location on the ancient Silk Road. Georgia has emerged as a key transit point for various legal and illegal materials due to its geography, unsecured borders, internal conflict, and corruption.

To explore Georgia's status as an intermediary or transit point for the trafficking of radiological materials, I conducted field research on the ground in the country from November 2008 through February 2009. I interviewed three smugglers of radiological substances (two of whom were in prison and one who had served time), two trafficking investigators who work for the Georgian Ministry of Internal Affairs, and one retired officer. My selection of respondents was intended to help clarify the complicated picture of how exactly radioactive materials are acquired, transported, and sold. The in-depth interviews also furnished a basis for evaluating traits of the individuals who are likely to engage in smuggling.

I also drew upon data from local court cases involving radioactive smuggling. Together with the analysis of the court files, I consulted criminal investigation records and interviewed representatives from various law enforcement agencies. This article therefore combines documentary and interview analysis to argue that the crime-terror nexus plays only a minor role in radiological trafficking, which is mainly profit-driven and opportunistic and is implemented through ad hoc networks and connections created for single deals, as opposed to established groups engaging in various criminal activities simultaneously. Professional and sophisticated criminal groups are rarely found to be complicit in this type of trafficking due to the unreliability of the market for radiological materials and the risk that arrest poses to these groups' ability to continue operating several types of businesses: legal (shops, restaurants, retail trade), semi-legal (front companies used to launder money and disguise criminal activities such as private security companies), and illegal (protection rackets used to extort money). Because the data analyzed in this article are limited to Georgia, the findings cannot be extrapolated to other states where nuclear trafficking occurs.

Opportunistic Smuggling as Organized Crime

Some research on radiological trafficking suggests that perpetrators are usually opportunists.⁷ Given the nature of "organized crime," whether the term can be accurately used in relation to opportunistic radiological smuggling is debatable. The majority of relevant literature is unanimous regarding the features of organized crime. Criminologist Michael Maltz lists nine attributes: corruption, violence, sophistication, continuity, structure, discipline, multiple enterprises, involvement in legitimate enterprises, and bonding rituals.⁸ Peter Reuter and Jonathan Rubinstein concentrate on five elements: multiple enterprises, durability, hierarchy, nonviolent dispute settlement procedures, and the use of violence and corruption to protect criminal enterprises.⁹ Some new research, however, views organized crime more in the vein of market-based transactions. From this perspective, organized crime is about "production and distribution of illegal goods and

services to willing customers.”¹⁰ The transactions in this market are more like isolated cases of commercial exchange rather than large-scale, well-planned criminal activity. The networks in this market often involve dispersed participants and diverse social actors; opportunistic chances are taken and short-term alliances are arranged.¹¹ Individuals may periodically mobilize for a specific criminal project.¹²

According to these broadly accepted definitions, strict hierarchy and continuity are not regarded as crucial features of organized crime. Criminal partnerships or networks can develop on the occasion of a single deal and last only for a very short time. This is close to Temple University professor Mark Haller’s “partnership model,” in which criminals are seen as merely pooling resources, sometimes for a single “job.” Haller argued that organized criminals do not typically arrange themselves in long-lasting, rigidly structured organizations.¹³ Maltz has also argued that the relationships are often task-dependent and changeable.¹⁴ Some scholars would call it “crime that is organized” rather than “organized crime,” since there is no criminal organization involved that would provide durability, continuity, and reputation.¹⁵ For the purposes of this article, then, it is better to shift the focus to organized criminal activity and away from organized criminal groups.¹⁶ Radiological smuggling as a criminal activity that is organized does not necessarily feature the involvement of the traditional established, organized groups that are hierarchical, monopolistic, and make extensive use of violence and corruption. Traditional organized crime groups need to be contrasted with the new crime groups that are more fluid and network-based.¹⁷

In this article, I demonstrate that there is a significant overlap between the groups that are involved in the smuggling of different licit and illicit goods and the radiological traffickers, to the point that these groups strongly resemble each other. Elaborating on the involvement of opportunists in drug trafficking, Cardiff University criminology professor Michael Levi explains that these criminals may sometimes act as courier and at other times serve as the actual trafficker or link between seller and buyer. Usually such opportunists rely on familiar individuals and friends to help arrange their criminal endeavors, and the permanence of arrangements is usually low, changing over short periods of time.¹⁸

The empirical evidence also shows that professional criminals are hardly ever involved in radiological smuggling cases, perhaps because the nature of professional criminality and its role and function in Georgia’s economy keeps this kind of criminal out of the radiological materials business. However, this does not mean that radiological smugglers lack expertise and professionalism. The empirical data show that the opportunist criminals involved frequently have solid backgrounds in law enforcement structures or legal business. The term “opportunistic” in this context should not be interpreted as meaning amateurish. By the same token, professionalism should not be equated with professional criminality. The latter category comprises a set of people who make their livelihoods largely from criminal activity, with a considerable degree of efficiency and skill; this class of senior criminal leaders, known in Georgia as “thieves-in-law” (*vory-v-zakone*), is described below.

Groups in Radiological Trafficking

Many kinds of groups have been involved in past radioactive trafficking incidents, ranging from criminal groups to legal businesses.¹⁹ The groups involved in smuggling of radiological materials are not necessarily organized and represent mainly ad hoc single-deal partnerships. These groups frequently comprise classic opportunists pursuing profit, rather than organized criminals or terrorists. In some cases, the individuals are impoverished and undereducated, trying to make some money just to survive. Many of the smugglers don't even have a criminal record and have previously been occupied in perfectly legal businesses. This past experience with collaboration in legal or illegal business proves crucial for the formation of these groups. In general, smuggling of radioactive substances attracts individuals with diverse backgrounds, ranging from former policemen and former scientists to poultry farm managers.

According to data from the supreme court of Georgia, since 2002 thirteen criminal cases overall have been brought against smugglers of radioactive materials, with a total of twenty-seven individual purported smugglers involved in the cases.²⁰ These smugglers were mostly ethnic Georgian (twenty individuals), as well as Armenian (four), Ossetian (one), Turkish (one), and Azerbaijani (one).²¹

As mentioned above, the networks of smuggling are constructed mainly for single transactions, and the operators may or may not have cooperated in illicit activity in the past and may have only engaged in prior legal enterprises. For instance, in June 2007, Georgian law enforcement officials arrested a Ukrainian citizen of Azeri origin, Mazhdun Shikhmamedov, and his Georgian accomplice, Emzar Saparidze, in Adjara, an autonomous coastal region of Georgia bordering Turkey. The police recovered natural uranium (yellowcake) and an empty container—emitting an unspecified amount of ionized radiation—that was part of some specialized equipment.²² Investigation revealed that Shikhmamedov obtained the metal container and the uranium in Kaliningrad in 1991 from a Russian citizen. He stored the materials in Azerbaijan until 2007 and then decided to sell them to a Turkish citizen.²³ According to the investigators, Shikhmamedov and Saparidze had legal business relationships (trade of various goods) before engaging in this criminal activity.²⁴

In another case, Tamaz Demetradze, a former officer with military experience in the Soviet and Georgian armies, was arrested on August 1, 2006 in Adjara for possessing 1 kg of yellowcake. According to interviews with the case investigators, Demetradze was an established smuggler of illicit goods with especially strong business interests and contacts in Abkhazia (a breakaway region of Georgia), including among law enforcement agencies and organized crime groups, both of which often cooperate with each other in the disputed region. The investigators stated that the uranium originated in Russia and was smuggled by unknown Russian organized criminals first to Sochi, a Russian Black Sea resort, and then into Abkhazia, where it was stored for two weeks. Demetradze apparently was a longtime smuggling and business associate of these criminal groups and therefore was hired to transport the uranium from Abkhazia to Turkey, where he was to find a buyer for the material.²⁵ In Adjara he contacted two local residents, Aslan Miqeladze and Nodar Dzneldze, who also claimed to have access to radioactive materials. The two men were

arrested together with Demetradze in possession of four glass flasks containing metallic arsenic instead of radioactive substances.²⁶

In the trafficking of radioactive substances (as with any kind of smuggling), the collaborators' past experiences working together are essential, especially given the highly secretive nature of the enterprise. Single-deal partnerships would not be possible without a great deal of trust, which is generated via past cooperation. As the empirical evidence shows, the individuals involved are also frequently related through blood kinship or close friendship ties. In the Demetradze case above, the link with organized crime groups is an exception rather than the rule. Contrary to conspiracy theories, there were several cases in which ordinary people found radioactive sources on former Soviet military bases and sold them as scrap metal without knowing what they had. In several instances, trucks full of scrap metal set off radioactive detectors at the border. On the other hand, the impoverished residents of highly criminalized zones, such as the cease-fire line in Abkhazia, have been complicit in radiological smuggling in the hope of earning money for survival. Poverty should be considered a significant contextual factor. According to Georgian national estimates, in 2006, some 31 percent of the population was reported to be below the poverty line, and the level of unemployment reached 14 percent.²⁷ One case in particular illustrates the role these factors play in driving individuals to consider radiological smuggling.

Two young Georgians, Ruben Gabisonia and Mikona Jiqia, were arrested by local police on routine patrol in November 2007 for attempting to smuggle cesium-137 through the Georgian town of Zugdidi in a package containing both the cesium and hazelnuts. Both individuals were impoverished residents of the local area who were acting as a courier and seller for other unidentified traffickers. Gabisonia told the court:

In August 2007, I was in the village of Mziuri in the Gali district and was helping my mother-in-law harvest the hazelnut crop. There I met an ethnic Abkhaz individual who offered me some money if I would help him sell radioactive materials in Zugdidi. I phoned my relative Mikona Jiqia and together we took the sack full of hazelnuts, which also contained concealed cesium-137, and transported the sack in our car across the cease-fire line to Zugdidi. I was gravely sick with tuberculosis and had no money at all. I thought I would make some money for medical treatment; that is why I agreed to do this. In Zugdidi, I was supposed to meet a former policeman named Mamed from Batumi (I don't know any other details about him), who was meant to buy this material. I met this person in the Zugdidi city center accidentally.²⁸

His accomplice Mikona Jiqia elaborated in her statement to the court:

Ruben Gabisonia and I are relatives, and I knew him very well. In October 2007, Ruben called me and told me to visit him in the hospital where he was undergoing treatment. I knew that Ruben was an honest person and he would help me in earning some money. I had lots of debts at that time. I had debts to the Abkhaz as well.²⁹ Gabisonia told me that some people from Batumi visited him yesterday and that they were interested in cesium-137. I said I knew some people on the Abkhaz side and that I would have a word

with them to find out. I did not know that cesium was so dangerous. . . . I knew that uranium was the most dangerous but did not know anything apart from that When the police searched our car in Zugdidi, they said that a bomb was being transported. This shocked me; I had no idea. I looked at Ruben and asked him why he did this to me. . . . I even had problems getting the money to pay for the transportation [of the cesium]. In the case of a successful deal I was to give the Abkhaz \$10,000 and then they would give us half. All the miseries of my life made me commit the crime.³⁰

Poverty, it is clear, is an important variable; yet empirical evidence shows that it is primarily individuals who are classic opportunists who are involved in radioactive materials smuggling. These are the people who would do anything for profit; they are constantly looking for any kind of opportunity (including scams) that would generate some income. Investigators frequently refer to people involved in radioactive materials smuggling as *mochaliche*, a colloquial Georgian term for individuals who are apt, resilient, and resourceful at finding ways to achieve their ends and who are willing to engage in both legal and illegal activities for profit.³¹ For *mochaliche*, the goal of earning money justifies any means, including the violation of ethical norms.

On July 17, 2006, Turkish citizen Kemal Onja was arrested in Batumi, Adjara, for attempting to trade radioactive materials. He was arrested as a result of a tip-off from his associate, Avtandil Vadachkoria, who told the court:

I had known Kemal for four to five years already. We were working on timber materials, exporting them to Turkey since 2005 Apart from the timber business, Kemal was involved in the business of scrap metal and trade in potatoes. . . . In 2006, he proposed some “big business” related to radioactive materials. Kemal said that he had materials worth \$4 million I realized that this material was radioactive. Kemal told me what it was; he gave me a piece of paper with the word “plutonium” on it I realized that this was very dangerous and decided to report it to the police.³²

The court investigation found that Onja had worked in Georgia for sixteen years prior to his arrest, had wide social and business contact networks, and had extensive knowledge of the Georgian legal system. The police recovered the radioactive materials—along with counterfeit U.S. currency—in his room at the Hotel Aqtur in Batumi, which he was using as a temporary residence as well as a business address.³³ Onja can be regarded as a typical opportunist smuggler, the type who is frequently involved in radiological trafficking cases.

There are also cases on record of amateurish attempts to sell uranium. Mikheil Asabashvili, a security guard, found radioactive material, including a factory-made container containing uranium, on the grounds of Alpha Ltd., a company based in Rustavi, an industrial town close to Tbilisi. Asabashvili and two of his personal acquaintances were arrested trying to sell the material to undercover Georgian police officers posing as Turkish citizens seeking to buy materials for \$200,000.³⁴

In short, I found little evidence to support theories claiming that hierarchical organized crime groups operate a transnational ring of radiological traffickers. Cases that involve a powerful agent from the “upperworld”—that is, the legitimate world, such as

state organizations and legal businesses—are very rare, but they do exist. For example, take the case of Garik Dadaian, one of the most significant reported instances of radiological trafficking. According to data shared by the analytical department of the Georgian Ministry of Internal Affairs (MIA), this 2003 case of HEU trafficking allegedly involved two Russian businessmen and a high-ranking Russian military officer. The HEU originated in Novosibirsk, Russia, according to the MIA, and the courier, Dadaian, an ethnic Armenian businessman who lived and worked in Moscow, was to transport the material to Turkey via Georgia.³⁵ In June 2003, border guards arrested Dadaian. As Archil Pavlenishvili, head of Georgia's MIA anti-smuggling department, told me, the border guards had information that Dadaian was transporting something illegal, but they did not know what. "Most probably they thought it was drugs," Pavlenishvili said. The seizure was pure luck, indicating a failure in intelligence. Dadaian, however, was subsequently released, apparently after bribing officials at the Georgian prosecutor's office.³⁶ In 2004, the new legal authorities under the Saakashvili government brought to power by the Rose Revolution successfully convinced Armenian authorities to arrest Dadaian again in Armenia, where he was tried and sentenced to two and a half months of imprisonment.³⁷ Shortly thereafter, however, the Armenian government granted amnesty to Dadaian, a decorated veteran of the Nagorno-Karabakh war.

This kind of case—involving individuals from the upperworld—is rare, although it illustrates the importance of high-level complicity and suggests that corruption can derail investigative and punitive measures. When considering HEU smuggling, it is important to keep in mind that weapons-usable materials are extremely difficult to obtain without large-scale bribery or the involvement of state officials.

Another important case involving HEU was uncovered on February 1, 2006, when MIA agents arrested four men in Tbilisi for attempting to sell 100 grams of HEU.³⁸ The arrests were the culmination of a months-long sting operation, conducted by the MIA with the assistance of the U.S. Federal Bureau of Investigation and Central Intelligence Agency. The main perpetrator was Oleg Khintsagov, a Russian citizen long involved in legal cross-border trade as well as illicit smuggling. Khintsagov's three Georgian collaborators were childhood friends from Kazbegi, a town in northern Georgia on the border with North Ossetia, Russia: Revaz Kurkumuli, a small businessman and small-time drug dealer; Badri Chikhashvili, a government security guard; and Henri Sujashvili, a petty contraband trader.³⁹ The men had been working together for years in legal and illegal businesses before the HEU trafficking case.⁴⁰

During the operation, Khintsagov told an undercover Georgian agent that he was looking for a buyer for 2–3 kg of enriched uranium that he was going to sell for \$30 million.⁴¹ Later on, he told a Georgian court that he bought 80 grams of "black powder" (the uranium) for \$10,000 in Novosibirsk from an ethnic Tatar named Rashid in the winter of 1999; Rashid told him that the substance was used in typography.⁴² Khintsagov stored the uranium in Vladikavkaz, Russia, over several years.⁴³ The Georgian undercover agent insisted that the purchase of HEU had to take place in Tbilisi rather than in North Ossetia and persuaded Khintsagov to bring samples to Tbilisi, where he and his accomplices were arrested.⁴⁴

Khintsagov, an engineer by training who has been in prison since his arrest, denies that he was transporting uranium at all. Originally a truck driver, he opened a small trading company in the 1990s through which he imported various goods for sale from and through North Ossetia into Georgia. Khintsagov also traveled extensively around the Middle East, including in Iraq, Iran, and Syria.⁴⁵ In an interview at the prison where he is being held, he told me:

I was a truck driver, transporting everything, including oil, corn, and other nutritional products. From North Ossetia, I was taking porcelain bowls for sale in Georgia. When I accumulated some capital from trading, I opened my own firm and hired other drivers. As a driver/trader I have been to Syria, Iran, and Kuwait. I worked on a construction site in Iraq during the Gulf War. I drove my truck to Syria through Georgia and Turkey to deliver the goods there.⁴⁶

His travels raised suspicions about possible links either with terrorists or with Russian intelligence agencies, but according to the Georgian officials I interviewed, no evidence of this was found. Additionally, my interviews with Khintsagov and his accomplice Chikhashvili indicate that their primary motive was profit. However, during our conversation Khintsagov demonstrated great familiarity with various radiation detectors, their locations, and the way they operated at the Georgian and Russian borders. This seems to indicate that he had been methodically planning his radiological smuggling activities by gathering necessary information. According to court files, Pat Grand, an expert from Lawrence Livermore National Laboratory in California, was invited to question Khintsagov during the court hearing. The questioning revealed that Khintsagov was well aware of the rules for handling enriched uranium and that he demonstrated "expert-level knowledge" in this subject.⁴⁷ Given the breakdown of the state monopoly over nuclear-related knowledge in post-Soviet Russia, this expertise could be easily generated without state involvement.

Georgian military officials believe that Chechen rebels may be connected with the June 2003 disappearance of four containers of radioactive cesium isotopes from the Vaziani Military Base near Tbilisi; however, no evidence has been found to substantiate this. Indeed, there is scant evidence of terrorist interest in purchasing radioactive materials.⁴⁸ (Georgian special intelligence services did have information in the late 1990s that Chechens were interested in obtaining uranium stored at the Mtskheta nuclear reactor, according to one officer with whom I spoke.⁴⁹ Some reports suggest that at one point, Chechen terrorists had access to radioactive materials.)⁵⁰

The lack of proven links between radiological traffickers and terrorist groups is significant; nevertheless, the possibility of such interaction is clear, given that most traffickers appear to be primarily motivated by profit, with few qualms about selling to anyone, even if they know or suspect that a person is involved with a terrorist group.

Organizational Sophistication and Professionalism

According to Georgian law enforcement officers, for every bona fide smuggler who has access to radiological materials and the ability and intention to sell them, there are approximately three or four minor swindlers who might pretend to have access to radiological materials in order to perpetrate a scam. Most of the known smugglers are between forty and fifty-five years old and frequently have no past criminal record.⁵¹ Many of them spent years looking for buyers before being arrested. According to Georgian investigators, smugglers mainly access potential buyers through intermediaries who are in the smugglers' networks of relatives, friends, and acquaintances. These intermediaries (sometimes a chain of intermediaries) are usually "well-connected individuals who are reputed to have a wide range of acquaintances" says one investigator.⁵² These individuals are often very close friends or relatives of the smuggler. One formerly incarcerated smuggler told me that when he was trying to find a client, he probed very close friends.⁵³ He said:

I can't understand how I could fall into the hands of the police. Usually, I was talking to very close people, those who would never report anything to the police. But maybe too many people got involved and that's why. When I was asking questions to my friends, they were asking the same questions to their friends. I trust my friends, and that's why I also trust the friends of my friends, but somewhere there was a rat involved.⁵⁴

Over time, the process of finding a buyer "professionalizes" the sellers, who develop unique knowledge sets. They gather information about different types of radioactive materials, border detection capabilities, transportation opportunities, and ways to avoid exposure. Yet the majority of these individuals cannot strictly be called professional or organized criminals because they lack ties to established criminal organizations (some do not even have a criminal record prior to their arrest for trafficking). One case involving two military officers is interesting in this regard.

In 2008, Alexander Vasadze and Giorgi Jiqia were arrested for their involvement in the illegal trade of cesium. Vasadze was an active officer in the Georgian military, and Jiqia was a retired military officer. Vasadze told the court:

I had served in the military forces of the Soviet Union since 1984. After the breakup of the Soviet Union, I became an officer in the Ministry of Defense of Georgia, and over the past few years I served as the head of the fuel and lubricants section of the material-technical unit in the Marneuli air base of the Ministry of Defense. In 1991 [when Russian troops were leaving Georgia—*Ed.*] (I can't remember the exact date and the month), one Ivanov, an officer of the chemical unit of the Soviet military base located in Vaziani, offered to sell me some cesium-137 for \$2,000. I did not know that this substance was that dangerous. I only became aware of this in the process of investigation. As far as I knew, cesium-137 was used to treat cancer. Anyway, I made a big mistake and bought the substance. Then I transferred the cesium to Tbilisi, where I started keeping it in my garage. Later, I took it from my garage and was keeping it in an iron pipe close to my house. In 2000 (I can't remember the exact date and the month) I decided to sell the cesium-137, and with this purpose I contacted my acquaintance Giorgi Jiqia, a retired

military colonel, and asked him to help me. In exchange, I would give him half of the money. On January 22, 2009, Jiqia contacted me and said he had a client who would pay \$30,000. I met Jiqia on January 23 because I had set a condition of getting part of the money (\$2,000) in advance. The rest, \$28,000, was to be transferred to my bank account after I gave the materials to the client. The client agreed to my conditions. Then, I took Jiqia to the village Dioknisi in Marneuli and showed him a hole in the ground and told him that I would place the cesium there after the client paid me \$2,000. On January 25, Jiqia called me and said that the client had paid the money. After this call, I put the cesium in my private car, a Ford Escort, took it to the Dioknisi village, and put it in the hole.⁵⁵

In another case in 2008, two former high-ranking police officers were caught trying to sell radioactive materials. According to investigators, an employee had stolen some cesium from the Mtskheta nuclear reactor, which serves as a storage facility for found orphan radioactive sources, and was collaborating with the former policemen to sell the cesium as uranium.⁵⁶ This demonstrates that collusion between criminals and nuclear facility personnel remains a significant threat; Georgia's precarious post-Soviet social conditions can also add incentive to potential criminals.⁵⁷ Since the 2004 Rose Revolution that brought Georgian president Mikheil Saakashvili to power, 16,000 police officers have been dismissed from the MIA. These dismissals were justified as general reform or a way to optimize human resources in the agency. Because appropriate compensation (severance pay, pension) was not provided, in order to survive, some dismissed police officers have turned to criminal activities, including smuggling. These individuals have significant insider law enforcement information and are aware of various tactics used by law enforcement organizations; they can easily derail investigations by using this knowledge. As a result, they are often involved in high-risk for high-gain activities such as radiological smuggling. Also, military officers were once part of Soviet military organizations that abandoned many of the radioactive materials. Frequently, these materials were purchased in the early 1990s from Soviet military officers; these individuals also have contacts among former or acting militaries in other former Soviet republics that can serve as transnational conduits for radioactive materials.

Difficult conditions have led a variety of Georgians to pursue smuggling; some former physicists and chemists are also involved. These individuals have had access to civilian sites that operated using radiation sources, and they attempted to divert these sources to the black market. Retired physicists may be keeping radioactive substances at their homes, according to one investigator I interviewed; such materials are probably from their former employment sites. Individuals with very diverse backgrounds, including a theater director and a poultry farm manager, have been discovered selling radioactive materials on the black market.⁵⁸ Many of these cases turn out to involve fraudulent goods, including two major types of scamming.

The first type of cases involve "red mercury," a fictitious substance usually sold as having fissile characteristics.⁵⁹ The actual materials that sellers offer as red mercury are generally some variety of fraudulently labeled chemical compounds.⁶⁰ In the late 1990s, a Georgian undercover officer was approached by a red mercury seller who insisted that the

material was valuable and cited examples of (nonexistent) successful past deals. Analyzing the substance, government experts concluded that it was a scam.⁶¹ The officer met with a group of swindlers who took him four times to view products that the sellers alleged were radioactive sources, yet in reality they were not.⁶²

The second major scam is similar: traders of radioactive materials often claim to be selling uranium, plutonium, or other weapons-usable materials, when what they are in fact selling is either something else, has been adulterated with other materials, or is only a very minuscule quantity.⁶³ Falsely representing a product was the method used by the thieves who stole cesium from Mtskheta in 2008 and tried to sell it as uranium (as mentioned above), and again when the two Adjarian collaborators of the aforementioned Demetradze tried to sell metallic arsenic as a radioactive substance. Similarly, some Georgian swindlers were apprehended in the late 1990s attempting to sell plates coated with very thin layers of radioactive materials.⁶⁴ And in 2006, Armenian citizen Iarjanik Virabian was arrested while attempting to sell selenium-74 as a radioactive material.

Scammer smuggling attracts opportunists seeking to make quick money. There is very little evidence of complicity by terrorist groups and no credible evidence that terrorists have been making any effort to locate, steal, or buy radioactive materials in Georgia.

Professional Organized Crime and Radiological Trafficking

The actors in traditional organized crime (e.g., robbers, thieves, and kidnappers) appear to avoid smuggling radioactive materials; at least, the majority of arrested smugglers have neither prior criminal records nor served any time, nor have they ever been on police watch lists. Before their arrests, they were not regarded as dangerous individuals or suspected of any links with organized crime or terrorists.⁶⁵ According to one Georgian investigator, members of the paramilitary group Mkhedrioni (which was considered an influential organized criminal group in the 1990s) did express interest in acquiring radiological materials, but they were never charged in any related crime.⁶⁶

Significantly, none of the above cases involved anyone from the professional criminal organizations that were dominant in the former Soviet Union, namely the *vory-v-zakone* (thieves-in-law). This is notable because the *vory* constituted the most powerful organized crime network in the 1990s, in both Georgia and Russia; in Georgia, they had stakes in almost every sector of licit and illicit activity. Georgian professional criminals were powerful in Russia, Ukraine, and other former Soviet republics, and they operated powerful transnational smuggling rings that served as conduits of various materials, both licit and illicit.

However, Georgian law enforcement and intelligence agencies are not aware of any evidence that would indicate that the *vory* were involved in radiological trafficking.

Mark Galeotti, an expert in transnational organized crime, defines *vory-v-zakone* as senior criminal figures in the former Soviet Union who “maintain, interpret and enforce the thieves’ code.”⁶⁷ Such criminal leaders first arose in the Soviet Union during the 1920s in the prison camps known as gulags.⁶⁸ In the Soviet Union, *vory* controlled a large part of the underground trade in spare parts, automobiles, timber, caviar, and gems. In the final

year of the Soviet Union, this black economy had an estimated value of 110 billion rubles.⁶⁹ In the period 1991–93, there were 600 *vory-v-zakone* operating in the former Soviet Union, according to estimates from the Russian Ministry of Internal Affairs.⁷⁰ Roughly one-third of these were ethnic Russians, and another third were ethnic Georgians. The remainder represented various nationalities such as Armenian, Azerbaijani, and Uzbek, among others.⁷¹ By my estimate, approximately 400 Georgian *vory-v-zakone* operate today, a figure that has almost doubled since the breakup of Soviet Union.

In fact, professional criminals were extremely influential in Georgia during the post-Soviet transition up until 2004, when the Saakashvili government came to power. They enjoyed a near-monopoly over the racketeering and extortion businesses, participated in kidnappings, and owned stakes in or provided protection for major businesses in the country. This high degree of collusion allowed them to participate in decision-making processes on the government level. Individuals directly controlled by professional criminals were found in every level of government, including city administrations and the national parliament.⁷²

Investigators maintain, however, that there is no evidence that these criminals expressed any interest in, or were somehow connected to, radiological trafficking.⁷³ One might wonder why. The answer can be found in an understanding of two things: the business interests of professional criminals (which are both licit and illicit), and the nature of radiological trafficking.

Professional organized crime has become increasingly entrepreneurial in the former Soviet Union countries, especially in Georgia. In the early 1990s, the initial strategy of organized criminals was to penetrate the upperworld, which included the weakened state authority and legal businesses. Before he was arrested in 1994, Dzhaba Ioseliani, a professional criminal and leader of the Mkhedrioni, became the deputy of then-President Eduard Shevardnadze. According to police files, *vory* tried to penetrate every business that generated significant income, including restaurants, hotels, retail, and microbus services.⁷⁴ Their involvement ranged from direct ownership to protection; sometimes the two forms of involvement overlapped. These professional criminals behaved as rational actors trying to diversify their business interests; any engagement with smuggling in radiological materials would have jeopardized their influence on legal businesses and damaged their links with the upperworld, especially with politicians.⁷⁵ In addition, over the past decade, and especially since September 11, 2001, the countries of the Commonwealth of Independent States have come under increasing pressure from the West, especially the United States, to intensify their efforts to fight trafficking in radiological materials. If the *vory* were involved in this kind of crime, it would have jeopardized the protection provided by representatives of the political elite and would have closed doors to the legitimate world. Hence, as Galeotti reported was the case with the Solntsevo criminal group in Russia, there was “a clear awareness on the part of senior figures that the dangers in such activities far outweigh the potential gains.”⁷⁶

The market in radiological materials is very unstable; there is high uncertainty about the potential financial profit to be gained, as well as the availability of buyers. The zeal of opportunist smugglers to sell radioactive materials is mainly driven by rumors spread within the criminal community that in the early 1990s an individual was able to sell a large

quantity of radioactive materials. However, according to one investigator, the rumors are pure urban legend: "No one is able to name either the exact date of the transaction or the first and last name or even the nickname of a successful seller."⁷⁷

In general, more stable and collusive networks can develop over the illicit wholesale trade in legal goods such as tobacco products. The legality of these products attracts legitimate actors from the upperworld, as well as professional criminals. For instance, for several years one of the largest tobacco-importing companies in Georgia was "protected" by the minister of one of the law enforcement agencies. A share of the profit from illegal shipments—usually involving under-paying customs duties by under-declaring the value of the imported goods—was regularly paid to this official.⁷⁸ This kind of network is highly unlikely to develop over the smuggling of radioactive materials due to vast market uncertainty and the nature of the goods.

Conclusion

It is frequently assumed that radioactive smuggling features the involvement of sophisticated criminal networks. While it is true that amalgams of actors from the criminal underworld and the legitimate upperworld are sometimes involved in radiological trafficking, the majority of smuggling groups are ad hoc, single-deal partnerships. It also seems that there is no prevalent nexus between traffickers and terrorists in Georgia involving illicit radioactive materials, although the existence of such a nexus is sometimes discussed in academic articles and the media.

The radiological materials market is highly uncertain in terms of availability of real buyers and profit; this keeps professional criminals away from this type of trafficking. There are some isolated cases of corruption involved with radiological trafficking, but these perpetrators are typically identified and punished. There are, however, two major remaining threats in Georgia: the involvement of former military officers and former policemen in this kind of criminal activity, and the possible collusion between smugglers and personnel working at nuclear sites. Based on current evidence, it appears that traditional and professional organized crime groups are rarely involved in the smuggling of radioactive materials. On the other hand, the experience with cross-border legal trade as well as with the smuggling of various goods facilitates the formation of the networks involved in radiological smuggling.

ACKNOWLEDGEMENTS

I am grateful to two anonymous reviewers for their helpful comments and suggestions. I also wish to acknowledge with thanks the help of Shota Utiashvili of the Georgian Ministry of Internal Affairs for arranging interviews, of Grigol Giorgadze for assistance retrieving materials from various courts, of Sarah Forbey for editorial assistance, and of all my interview subjects in Georgia.

NOTES

1. See for instance Rob Edwards, "Top Police Officer Warns that Nuclear Attack Is Inevitable," *Herald* (Scotland), November 24, 2007; "Dirty Bomb Inevitable, Experts Believe," *Homeland Security NTARC News*, June 25, 2006; Chad Brown, "Transcendental Terrorism And Dirty Bombs: Radiological Weapons Threat Revisited," Center for Strategy and Technology, Air War College, Maxwell Air Force Base, Occasional Paper No. 54, February 2006.
2. Radiological trafficking involves smuggling of both nuclear and radioactive materials. Nuclear materials include "any special fissile material or source material that may be used for the development of a nuclear weapon (for example plutonium-239; uranium-233; uranium enriched in the isotopes 235 or 233)." Radioactive materials include "a much broader class of substances and includes nuclear material, but also other substances that, although emitting ionizing radiation, are not suitable for producing nuclear explosions (cesium, strontium, iridium)." See "Combating Illicit Trafficking in Nuclear and other Radioactive Material, Technical Guidance Reference Manual," International Atomic Energy Agency, Nuclear Security Series No. 6, 2007, pp. 6–7.
3. International Panel on Fissile Materials, "Global Fissile Material Report 2009: A Path to Nuclear Disarmament," 2009, <www.fissilematerials.org/ipfm/site_down/gfmr09.pdf>.
4. International Panel on Fissile Materials, "Consolidating Fissile Materials in Russia's Nuclear Complex," Research Report No. 7, 2009, <www.fissilematerials.org/ipfm/site_down/rr07.pdf>.
5. Barack Obama, "Remarks by President Barack Obama," Hradcany Square, Prague, Czech Republic, Release of the White House, Office of the Press Secretary, April 5, 2009.
6. Lyudmila Zaitseva, "Nuclear Trafficking," in Rob McCusker, ed., *Transnational Crime: A Global Perspective* (London: Henry Stewart Talks, Ltd.).
7. Sonia Ben Ouagrham-Gormley, "Back to Normal, an Unrealized Nexus? WMD-Related Trafficking, Terrorism, and Organized Crime in the Former Soviet Union," *Arms Control Today*, July/August 2007, <www.armscontrol.org/act/2007_07-08/CoverStory>.
8. Michael D. Maltz, "Defining Organized Crime," in Ko-lin Chin, Robert J. Kelly, Rufus Schatzberg, eds., *Handbook of Organized Crime in the United States* (Westport, CT: Greenwood Press, 1994), p. 34.
9. Peter Reuter and Jonathan Rubinstein, "Fact, Fancy, and Organized Crime," *Public Interest* 53 (Fall 1978), pp. 45–67.
10. Robin Thomas Naylor, *Wages of Crime: Black Markets, Illegal Finance, and the Underworld Economy* (Ithaca, NY: Cornell University Press, 2002), p. 16.
11. Vincenzo Ruggiero, "Global Markets and Crime," in Margaret E. Beare, ed., *Critical Reflections on Transnational Organized Crime, Money Laundering, and Corruption* (Toronto: University of Toronto Press, 2003), p. 180.
12. Joseph Albini, quoted in R.J. Kelly, ed., *The Upperworld and the Underworld: Case Studies of Racketeering and Business Infiltrations in the United States* (New York: Kluwer Academic/Plenum Publishers, 1999), p. 18.
13. Mark H. Haller, "Illegal Enterprise: A Theoretical and Historical Interpretation," *Criminology* 28 (1990), pp. 207–36.
14. Maltz, "Defining Organized Crime," p. 30.
15. James O. Finckenauer, "Problems of Definition: What is Organized Crime?" *Trends in Organized Crime* 8 (Spring 2005), p. 76.
16. Frank A. Hagan, "Organized Crime and Organized Crime: Indeterminate Problems of Definition," *Trends in Organized Crime* 9 (Summer 2006), pp. 127–37.
17. Louise Shelley, "The Unholy Trinity: Transnational Crime, Corruption and Terrorism," *Brown Journal of International Affairs* 11 (Winter/Spring 2005), pp. 101–11.
18. Michael Levi, "Organized Crime and Terrorism," in Mike Maguire, Rod Morgan, and Robert Reiner, eds., *The Oxford Handbook of Criminology* (Oxford: Oxford University Press, 2007), fourth ed., pp. 771–809.
19. See for instance Alexander Kupatadze, "Radiological Smuggling and Uncontrolled Territories: The Case of Georgia," *Global Crime* 8 (February 2007), pp. 40–57.
20. Data provided to the author by the Supreme Court of Georgia, Letter No 2-k, dated February 2, 2009, as part of a formal response to the author's official query of January 8, 2009, Tbilisi, Georgia.
21. *Ibid.*

22. According to the U.S. Energy Information Administration, yellowcake is “a natural uranium concentrate that takes its name from its color and texture. Yellowcake typically contains 70 to 90 percent triuranium octoxide (U₃O₈) by weight. It is used as feedstock for uranium fuel enrichment and fuel pellet fabrication.” See Energy Information Administration, “Glossary: Yellowcake,” <www.eia.doe.gov/cneaf/nuclear/page/umtra/glossary.html>.
23. Georgian MIA, “Radioaqtiuli Masalebis Tsinaagmdeg Mimartuli Gonisdziebebis Shesakheb, 2002–2008” [Department Fighting Smuggling in Radiological Materials, 2002–2008], data provided by Archil Pavlenishvili, head of department, Tbilisi, Georgia, January 2009.
24. Archil Pavlenishvili, head, Department Fighting Smuggling in Radiological Materials, Georgian MIA, interview with author, Tbilisi, Georgia, January 19, 2009, hereafter cited as “Pavlenishvili, interview with author.”
25. Ibid.
26. Batumi City Court files, Case No 1-1122, court transcript dated October 13, 2006, provided by Batumi City Court on March 4, 2009.
27. CIA, “Middle East: Georgia,” *CIA World Factbook*, 2010, <<https://www.cia.gov/library/publications/the-world-factbook/geos/gg.html>>.
28. Zugdidi City Court files, Case No 1/-819-08, court transcript dated January 31, 2008, provided by Zugdidi City Court on March 11, 2009 in response to author’s official request.
29. In her testimony, Jiqia mentions that she was once arrested for smuggling cigarettes; it is likely that she owed debts to Abkhaz wholesalers who gave her the cigarettes to sell in order to repay what she owed. This is the normal way of doing contraband business in the region.
30. Zugdidi City Court files, Case No 1/-819-08.
31. Police officers working on cases of radiological smuggling (names withheld by request), interviews with the author, Tbilisi, Georgia, January 2009.
32. Batumi City Court files, Case No 1-102, court transcript dated January 24, 2007, provided by Batumi City Court on March 4, 2009.
33. Ibid.
34. Tbilisi City Court files, Case No 1/8391, court transcript dated April 5, 2006, provided by the Tbilisi City Court in response to the author’s request, on March 22, 2009.
35. Georgian MIA, Department of Analysis, data provided July 2005, Tbilisi, Georgia.
36. Pavlenishvili, interview with author; police investigator K. (name withheld by request), interview with author, Tbilisi, Georgia, January 2009.
37. Ibid.
38. For more details, see Lawrence Scott Sheets, “A Smuggler’s Story,” *The Atlantic*, April 2008, <www.theatlantic.com/doc/200804/uranium-smuggling>; and M. Bronner, “100 Grams (and Counting . . .): Notes from the Nuclear Underworld,” *Managing the Atom Project*, Harvard University, June 2008.
39. Pavlenishvili, interview with author.
40. Ibid.
41. Georgian MIA, Department Fighting Smuggling in Radiological Materials.
42. Tbilisi Appellate Court files, Case No 1/b-2380-06, court transcript dated March 30, 2007, provided by Tbilisi Appellate Court in response to author’s request, April 3, 2009.
43. Georgian MIA, Department Fighting Smuggling in Radiological Materials, January 2009.
44. Pavlenishvili, interview with author.
45. Oleg Khintsagov, uranium smuggler arrested in 2006, interview with author, Prison No. 2, Rustavi, Georgia, January 20, 2009.
46. Ibid.
47. Tbilisi Appellate Court files, Case No 1/b-2380-06.
48. Georgian police officers investigating cases of radiological smuggling (names withheld by request), interviews with author, Tbilisi, Georgia, January 2009.
49. Former police investigator V. (name withheld by request), interview with author, Tbilisi, Georgia, January 12, 2009.
50. Graham Allison, “Nuclear Terrorism: How Serious a Threat to Russia?” *Russia in Global Affairs*, September/October 2004, <www.globalaffairs.ru/articles/0/3069.html>; Charles D. Ferguson and

- William C. Potter, *The Four Faces of Nuclear Terrorism* (Monterey, CA: Monterey Institute for International Studies, 2004), p. 29.
51. Georgian Police officers investigating cases of radiological smuggling (names withheld by request), personal correspondence with author, January 2009.
 52. Pavlenishvili, interview with author.
 53. Smuggler T., released from prison in 2004 (name withheld by request), interview with author, Tbilisi, Georgia, January 16, 2009.
 54. Ibid.
 55. Marneuli District Court files, Case No 1/186-08, court transcript dated July 4, 2008, provided to the author by Marneuli District Court on March 2, 2009.
 56. Pavlenishvili, interview with author. "Orphan" sources are unsecured or abandoned radioactive materials. A complete definition is available from the U.S. Nuclear Regulatory Commission, <www.nrc.gov/materials/miau/miau-reg-initiatives/orphan.html>.
 57. For detailed analysis on the reform process in the Georgian MIA, see Alexander Kupatadze et al., "Policing and Police Reform in Georgia," in Louise Shelley et al., eds., *Organized Crime and Corruption in Georgia* (London: Routledge, 2007), pp. 50–68.
 58. Georgian police officers investigating cases of radiological smuggling (names withheld by request), interviews with author, Tbilisi, Georgia, January 2009.
 59. Radiation experts at the Georgian Ministry of the Environment (names withheld by request), interviews with author, Tbilisi, Georgia, January 2009.
 60. Police investigator K. (name withheld by request), interview with author, Tbilisi, Georgia, January 20, 2009.
 61. Former police investigator V., interview with author, Tbilisi, Georgia, January 12, 2009.
 62. Ibid.
 63. Pavlenishvili, interview with author.
 64. Former police investigator V., interview with author.
 65. Police officers working on cases of radiological smuggling (names withheld by request), interviews with author, Tbilisi, Georgia, January 2009.
 66. Pavlenishvili, interview with the author.
 67. Mark Galeotti, "The Mafiya and the New Russia," *Australian Journal of Politics and History* 44 (1998), p. 429.
 68. Federico Varese, *The Russian Mafia: Private Protection in a New Market Economy* (Oxford: Oxford University Press, 2001), pp. 145–46.
 69. Stephen Handelman, *Comrade Criminal* (New Haven: Yale University Press, 1997), p. 28.
 70. Varese, *The Russian Mafia*, p. 167; and Handelman, *Comrade Criminal*, p. 28.
 71. Joseph Serio and Viacheslav Razinkin, "Thieves Professing the Code: the Traditional Role of Vory-v-zakone in Russia's Criminal World and Adaptations to a New Social Reality," *Low Intensity Conflict and Law Enforcement* 4 (1995), p. 77.
 72. Alexander Kupatadze, "Political-Criminal-Business Nexus and State Capture in Georgia, Ukraine and Kyrgyzstan: Comparative Analysis," in J. Shapland, and P. Ponsaers, eds., *The Informal Economy and Connections with Organised Crime: The Impact of National, Social and Economic Policies* (Amsterdam: Boom Publishers, 2009).
 73. Police officers working on cases of radiological smuggling (names withheld by request), interviews with author, Tbilisi, Georgia, January 2009.
 74. Louise Shelley, "Georgian Organized Crime," in Shelley et al., eds., *Organized Crime and Corruption in Georgia*, p. 56.
 75. Becker, like many other economists, viewed criminality through the prism of economic behavior and argued that crime is a rational choice in which the benefits outweigh the risks. Gary Becker, "Crime and Punishment: An Economic Approach," *Journal of Political Economy* 76 (1968), pp. 169–217.
 76. Mark Galeotti, "Empire of the Sun—Russian Organized Crime's Global Network," *Jane's Intelligence Review*, April 28, 2008.
 77. Pavlenishvili, interview with author.
 78. Former employee of a cigarette importing company (name withheld by request), interview with author, Tbilisi, Georgia, June 12, 2005.