

Eric Stover
Molly Ryan

Breaking Bread with the Dead

ABSTRACT

The establishment of two international ad hoc tribunals for Rwanda and the former Yugoslavia, and the creation of an International Criminal Court within the next five years, has increased the need for archaeologists who can assist in the exhumation of individual and mass graves associated with war crimes and genocide throughout the world. This work examines the efforts of teams of archaeologists and forensic scientists which have investigated forced disappearances, political killings, and war crimes in Argentina, Guatemala, Iraqi Kurdistan, and the former Yugoslavia since 1984. As more archaeologists enter this growing field, it is becoming apparent that their training at the university and post-graduate level needs to be supplemented with courses that will better prepare them for international forensic work. Not only do they need to be trained in forensic methods and procedures, they also need to be knowledgeable of legal and evidentiary procedures and the political and cultural dynamics of the countries where they will be working.

Introduction

W. H. Auden once wrote: "Through art, we are able to break bread with the dead, and without communion with the dead a fully human life is impossible." Had Auden been an archaeologist and not a poet he might have chosen the word "science" instead of "art." Both the arts and sciences share Auden's notion that the living have a responsibility to learn from the dead. And though the dead may speak softly, only our failure—either as artists or scientists—to listen and interpret the evidence can dishonor their final testament.

Over the past fifteen years, the United Nations and human rights organizations, such as the Boston-based Physicians for Human Rights, have recruited archaeologists to exhume individual and mass graves associated with investigations of political killings, war crimes, and genocide in over a dozen countries worldwide. Archaeologists have joined teams of lawyers and scientists (forensic anthropologists and pathologists;

odontologists; radiologists; and, in a few cases, geneticists) at burial sites where they have worked for weeks or months on end. In at least two countries—Argentina and Guatemala—local archaeologists have formed permanent forensic teams to investigate clandestine graves.

These teams—whether local or international in origin—have presented their findings before a wide range of legal and judicial institutions, including national commissions seeking to establish the whereabouts of the "disappeared," national courts investigating the criminal culpability of individual police and military officers, and ad hoc international tribunals established to try suspected war criminals in the former Yugoslavia and Rwanda. Now that the Rome Conference of June 1998 has drafted a treaty establishing an International Criminal Court and, given the likelihood that the level of political violence and internal conflicts will continue to grow, it is certain that the court will need archaeologists to help it gather physical evidence of war crimes and crimes against humanity.

In this paper we describe the efforts of teams of archaeologists and forensic scientists who have investigated forced disappearances, political killings, and war crimes in Argentina, Guatemala, Iraqi Kurdistan, and the former Yugoslavia (Joyce and Stover 1991; Stover and Manuel 1991; Anderson 1993; Stover and Peress 1998). We show how the different political and social conditions in each of these countries affected both the work of these forensic teams and how the evidence they gathered was used by governmental commissions and local and international courts to establish the facts regarding alleged violations of international human rights and humanitarian law. We recommend that university curricula for archaeology students at both the undergraduate and graduate levels be expanded to include courses in the forensic sciences and the historical, legal, and cultural aspects of internal and international conflicts. This curriculum should be interdisciplinary and prepare archaeology students for forensic work in the service of human rights at home and abroad.

Night and Fog

Present-day human rights advocacy is rooted in the Universal Declaration of Human Rights, adopted in 1948 by the United Nations largely as a response to atrocities committed by the Nazis during World War II: mass deportations, imprisonment, ghastly human experiments, and the killing of millions of innocent civilians. The Nazis also provided future generations with a 20th-century precursor to the practice of making people “disappear.”

On 7 December 1941, two years after the outbreak of World War II, Field Marshall Weillhelm Keitel, Chief of the German High Command, issued the first of a series of directives designed to implement one of Hitler’s orders with respect to the western occupied territories (Gorlitz 1965). The order—the *Nacht und Nebel* Decree (“Night and Fog” Decree)—was seen as a means to curb sabotage by the resistance movement, particularly in France. Believing that death sentences create martyrs, Hitler ordered that, with the exception of those cases where guilt could be established beyond a doubt, everyone arrested for suspicion of “endangering German security” was to be transferred to Germany under cover of night. “Effective intimidation,” Keitel wrote in one of his directives, “can only be achieved either by capital punishment or by measures by which the relatives of the criminal and the population do not know his fate” (Shirer 1960). The Nazis and their supporters arrested and transported thousands of people to Germany and then to concentration camps under the *Nacht und Nebel* Decree (Krausnick and Broszat 1970:216).

Thirty years later, “night and fog” began to claim its victims in Guatemala, Brazil, Chile, and Argentina and later in Honduras and the Philippines, where the practice of making people disappear was called “salvaging.” The state-sponsored strategy of “disappearance” in these countries was designed to instill a climate of terror in an ideological war against “Marxist subversion.” No one summed up this philosophy more succinctly, or chillingly, than then-Argentine President General Jorge Rafael Videla, who explained to foreign journalists in December 1977 that a “terrorist is not just someone with a gun or a bomb, but someone who spreads

ideas that are contrary to Western and Christian civilization” (Freund 1979:37-41).

Argentina

More than ten thousand people disappeared during the seven years of military rule in Argentina that ended in 1983 (National Commission on the Disappeared 1986:1-31). Relying on an extensive intelligence network, military and police death squads, known as *grupos de tareas* (task forces), operated out of a labyrinth of 360 secret detention centers. These squads abducted thousands of people suspected of sympathizing with two urban guerrilla movements, the Montoneros and the Trotskyist *Ejercito Revolucionario del Pueblo*, or People’s Revolutionary Army. The military junta, which ruled Argentina, called its antisubversive campaign the *guerra sucia* (“dirty war”), a genuine, if twisted, reference to the guerrilla tactics of unannounced bombings and kidnappings. But as it soon became apparent, the junta itself bypassed all legal channels to “win” a war declared against its own people. Its intentions were made explicit by General Iberico Saint Jean, governor of the Buenos Aires province, who stated in May 1976, “First we will kill all the subversives; then we will kill their collaborators; then . . . their sympathizers; then . . . those who remain indifferent; and finally we will kill the timid.”

During the “dirty war,” detainees were brought to a secret detention center, where a guard would assign them a number and lead them to a cell. Many detainees, particularly the elderly, died under torture. Some were eventually freed or transferred to officially recognized jails or prisons. Most, however, were secretly executed without charge or trial. The task forces disposed of the bodies in ways that, they believed, would conceal the crimes. They dropped some victims from military aircraft over the Atlantic or into the estuary of the River Plate. In most cases, however, military or police squads delivered the bodies of their victims to municipal morgues. Army trucks arrived at morgues late at night, carrying bodies, often mutilated and bearing signs of torture. Many morgue workers were well aware of the atrocities committed around them; nevertheless, officers ordered the morgue workers not to perform autopsies and simply to

register the bodies as “N. N.,” for “no name.” These were generally buried in graves bearing the same epitaph.

By 1981 the military junta ruling Argentina was in trouble. The government had failed to improve the economy and the world, it seemed, was denouncing the Argentine military as Latin America’s worst human rights violator. Argentina’s hemorrhaging foreign debt had risen from \$6.4 billion in 1976, when the military took over, to \$30 billion in 1981. Argentines, shaking off their lethargy and fear, rose up in a series of strikes and mass protests demanding a better standard of living and return to civilian rule. The final blow came in June 1982 when Argentina suffered a humiliating defeat as its navy tried to take the Falkland Islands from the British. Shortly thereafter, the military junta lifted the six-year ban on political activity and promised elections in late 1983. Before leaving office the junta took care to declare an amnesty for all those who might be brought to trial for crimes committed during their tenure.

On 30 October 1983, Argentines went to the polls and elected Raul Alfonsin, a fifty-seven-year-old former small-town lawyer, as president. Within the first few weeks of his administration, the new leader retired dozens of generals and, after persuading congress to nullify the military’s self-amnesty law, ordered the prosecution of the junta leaders. Alfonsin also created a blue-ribbon panel of prominent Argentines chaired by the novelist Ernesto Sabato to investigate the fate of the disappeared.

In June 1984, at the request of Ernesto Sabato and the Grandmothers of the Plaza de Mayo, a local human rights organization dedicated to locating over 200 missing children, Stover traveled with a team of forensic scientists, assembled by the American Association for the Advancement of Science (AAAS), to assist the Sabato commission in its search for the disappeared. It was a sobering experience. Traveling to morgues and cemeteries throughout the country, we were shown endless mounds of plastic bags containing the skeletal remains of persons exhumed in recent months from individual and mass graves. One mass grave contained 300 bodies, all of persons who were believed to have disappeared.

In a rush to find out what had happened to the disappeared, local judges had ordered hun-

dreds of N.N. graves excavated. Cemetery grave diggers, aided by heavy earth-moving equipment, performed the exhumations. The result was disastrous. As bulldozers and workers with spades and shovels heaped mounds of bones next to the opened graves, the callous mishandling of the remains drew angry protests from the families of the disappeared. Human rights lawyers also recognized that little usable forensic evidence would be recovered from these grisly harvests.

On the last day of our trip, we held a press conference in Buenos Aires calling for the Argentine government to declare a moratorium on all exhumations and to train a team dedicated to the scientific investigation of the disappeared. Just one grave excavated using archaeological techniques, we argued, would yield more evidence than several hundred demolished by bulldozers. We went on to pledge our support to help train a national forensic team.

Eight months later, a second team of forensic experts arrived in Argentina to direct a five-week training workshop in the exhumation and identification of skeletal remains. The pupils were mainly young Argentine archaeology, anthropology, and medical students. Notably few senior Argentine forensic scientists or archaeologists volunteered to help with the training because they were apparently still fearful of the military or had themselves been complicit in hiding crimes committed during military rule.

By 1986, the nucleus of Argentine students who had attended the first workshop had formed the Argentine Forensic Anthropology Team and opened a makeshift office in the center of Buenos Aires. Remarkably, all of the team members were under the age of thirty. They were also frequent targets of death threats and the occasional disparaging newspaper article or editorial questioning their motives and professional capabilities. Even so, they persisted with little funding and an almost obsessive and courageous compassion for their grim work (Figures 1, 2).

The Argentine forensic team’s search for the disappeared was locked in a race against time. Many medical and dental records had already been discarded. Most others were incomplete: more than half of the disappeared were between twenty and thirty years old, an age group that



FIGURE 1. The Argentine Forensic Anthropology Team excavates a mass grave on the outskirts of Buenos Aires in 1989 (Credit: Christopher Joyce).

generally receives little medical care and thus leaves few antemortem records. Moreover, most of the disappeared had been buried in the 1970s, and hair and clothing were decomposing, erasing vital clues.

The mid- to late 1980s was a precarious time for the young Argentine team. Military officers, angered by the Alfonsín government's investigation of crimes committed under the military junta, staged a series of rebellions. On one occasion a group of middle-ranking officers took over the Campo de Mayo army base near Buenos Aires. Their message to Alfonsín and anyone else that wished to investigate the past was clear: back off or else.

The public poured into the streets in protest against the military rebellion, but Alfonsín balked, refusing to roust the officers from their stronghold. Instead, he chose to negotiate with the rebels, who eventually surrendered. Two months later, on 5 June 1987, the government

enacted the law of *Obediencia Debida*, or Law of Due Obedience (Americas Watch 1987:64-68). The new law instructed the courts to exempt from prosecution all military and police personnel except those who were chiefs of security areas or security forces. In effect, only thirty to fifty senior officers could still be prosecuted.

With most of the dirty war's perpetrators now effectively amnestied, why continue to dig up the disappeared? From a humanitarian perspective, families would finally know the fate of their lost ones and be able to give them a proper burial. There was also the need to set the historical record straight.

During the "dirty war," the military junta claimed that the disappeared were living overseas or had been killed in shoot-outs with police and military units. Because the deceased were guerrilla fighters, the generals argued, they used false names and carried no identification. As a result, the authorities had no other alternative than to bury the deceased in unidentified graves. However, the Argentine forensic team was able to demonstrate that these claims by the military were part of a cover up. Many, if not most, of the remains of the disappeared the Argentine forensic team had exhumed bore signs of execution-style killings, often at close range. On some of the remains the only trace of physical violence had been a single-gun shot wound to the head. Still, others had been found with their hands bound behind their backs.

Another important legacy of the AAAS's involvement in Argentina was the eventual application of mitochondrial DNA (or mtDNA) analy-



FIGURE 2. The Argentine Forensic Team excavates a mass grave on the outskirts of Buenos Aires in 1989 (Credit: Mercedes Doretti).

sis in the identification of the skeletal remains of the disappeared. mtDNA testing has several advantages over conventional nuclear DNA testing for forensic projects. First, mtDNA is easier to recover from forensic samples (such as a bone or tooth fragment) than nuclear DNA, which is present in only two copies per cell. Moreover, mtDNA is inherited only from the mother. This means that a comparison of the mtDNA genotypes of the deceased and a single maternal relative is sufficient to confirm or exclude identification (Boles et al. 1995).

The AAAS also aided the Grandmothers of the Plaza de Mayo in their efforts to identify over 200 children of the disappeared who had been abducted or born in secret detention centers during the “dirty war” years. After their parents were killed, most of these children were given to childless families with connection to the military and police (Figure 3). And, after the return to civilian rule, the biological grandparents of these missing children wanted them reunited with their families (Joyce and Stover 1991). Thanks to numerous and highly specific “genetic markers”—including human leukocyte antigens (HLA), blood groups, red-cell enzymes, plasma proteins, and variations of sequences of DNA, geneticists could determine the grandpaternity of the children once they were located.

The biological basis of the approach relies on the fact that whereas a child’s clothes, name, and hair color can be altered, the genes never change. Thus the evidence for relationship of a child to his family remains with that child and his relatives forever. The procedure for determining that relationship is straightforward. Small blood samples are taken from the individuals who might be related. The cells of the adults and the child are tested for matching genetic markers. When certain markers match, scientists can say how likely it is that the adults and the child are related.

By 1986 the Argentine parliament had passed a law establishing a voluntary National Genetic Data Bank. The law was a tremendous boon to the Grandmothers as it specified that anyone who had lost a relative during the “dirty war” years could give a blood sample which would be frozen and preserved indefinitely. Even after the donors died, DNA from their blood samples

could be tested against samples taken from missing children who might be located years and even decades later (King 1992; Penchaszadeh 1997). The DNA evidence will be pivotal in the forthcoming trials of the former junta leader Jorge Videla and eight other military officers who are charged with the kidnapping of children—a crime not protected under the 1987 amnesty laws.

In recent years, the Argentine Forensic Anthropology Team has conducted forensic investigations of the disappeared in over a dozen countries, including Bolivia, Haiti, the former Yugoslavia, Brazil, El Salvador, Colombia, Peru, Rwanda, Ethiopia, Iraqi Kurdistan, and Guatemala. In perhaps their most celebrated case, the Argentine forensic team discovered the grave of the revolutionary leader Ernesto “Che” Guevara in a remote region of Bolivia.

Guatemala

Since 1954, when a U.S.-managed military coup overthrew the democratically-elected government of Jacobo Arbenz Guzman, Guatemala has been known as a place where soldiers and policemen, untrammled by legal restraints of any kind, committed torture and murder in the name of anticommunism (Perera 1993:40-41). Subsequent military-led administrations have been aptly characterized as some of the bloodiest in



FIGURE 3. “We are searching for two generations” reads a poster in the Office of the Abuelas de la Plaza de Mayo in Buenos Aires, Argentina. (Credit: Abuelas de la Plaza de Mayo).

the hemisphere. In 1985, the military allowed the election of a civilian government, and the next year Christian Democrat Vinicio Cerezo Arevalo took office promising to end military impunity and build the foundations of democratic governance. Since then, Guatemala's human rights record has gradually improved, although a series of "self-amnesty" decrees promulgated by previous military governments have effectively prevented any judicial investigations of high-level military officers and police for past human rights abuses.

Since the 1960s, when the Guatemalan army first faced a challenge from leftist insurgents, it has made tens of thousands of people—trade unionists, leftist political activists, students, teachers, peasant and human rights activists, and many people suspected only of having contacts with or sympathizing with guerrillas—disappear. Most of the disappeared are presumed to have been killed after a period of torture and interrogation. Many more have simply been killed.

Unlike Argentina, very few people survived torture or disappearance in Guatemala (Amnesty International 1981). Often the bodies of the disappeared, bearing signs of torture or mutilation, were found dumped in ravines or by the sides of roads. In some cases, the perpetrators buried the bodies in clandestine graves or forced villagers to do the dirty work for them. On rare occasions, bodies found near major towns and cities were taken to local morgues where autopsies would be performed by *medico-legistas*, or medicolegal doctors. But most of Guatemala's disappeared, especially those from indigenous groups, remained as anonymous in death as they had been in life.

Guatemala's laws and rules governing its death investigation system, as in most Latin American countries, are derived from the Napoleonic code (Rojas 1982:11-15). The penal procedures code provides that a judge must order an autopsy in all violent and suspicious deaths, unless the cause of death can be determined by an external examination of the body. Until the mid-1990s, forensic doctors in Guatemala received no training in forensic pathology and many had no training in anatomic pathology. Nor did the University of San Carlos—Guatemala's only public university—offer medical students residency programs in forensic medicine. To become a forensic doctor, you simply needed to be a

Guatemalan citizen by birth, a medical doctor, and a member of the country's medicolegal association. From then on, you learned the profession in the morgue.

Unlike forensic investigators in the United States, Guatemalan forensic doctors did not go to the scene to take custody of the body. Thus, they lost the opportunity to gather physical evidence, such as blood samples, hair, or fibers lying on or near the body, which untrained investigators may easily overlook. They also lost the benefit of examining contextual evidence. This evidence includes such things as the body position and condition, including its warmth or coolness, lividity, and rigidity, as well as the body's relationship to other objects at the scene.

"In a sense we work blindfolded," a forensic doctor in Guatemala City told Stover in 1991.

We receive a body at the morgue. The judge gives us a one-line report, something like 'body found on such and such a street with gunshot wound.' Now this guy could have shot himself by accident or he could have committed suicide. Or maybe he was murdered. But to determine which one we need more information. So we ask the police for their report on evidence they've collected at the scene. But that gets us nowhere, because they never send it. What we need is to go to the scene ourselves, to see the body, and collect our own evidence.

By 1991, Guatemalan human rights groups had obtained information on the existence of over 100 mass graves throughout the country. But judges had only ordered the excavation of six graves. Of these, none had been conducted with the assistance of archaeologists or forensic anthropologists. Of the 64 sets of remains removed from these graves, only 8 (12.5%) had been identified on the basis of clothing remnants, particularly belts and shoes, or other artifacts such as jewelry.

Nineth Montenegro de Garcia (pers. comm.), the president of the Mutual Support Group, the organization of the relatives of the disappeared, recalled the scene at the exhumation of five bodies from a common grave in the village of Pacoc in June 1988:

All of us worked at unearthing that grave—the relatives, the firemen, even children. Little by little, we found bones and pieces of clothing. Some of the bodies were identified simply on the basis of the belts they were

wearing. But the bones were all mixed together, so the forensic doctor couldn't match the bones anatomically. I still have my doubts about the identifications because it was all so rudimentary. It was terrible, the children were crying, and relatives were pointing and saying, "That's him, that's him!" Eventually, the forensic doctor began stacking the bones and bits of clothing in a pile beside the grave and saying, "Okay, this is so and so." Then the relatives put the remains in separate plastic bags and took them away.

Guatemala's search for the disappeared has come a long way since the grisly scene at the Pacoc grave described by Montenegro de Garcia nine years ago. The first step forward took place in January 1990, when a Guatemalan judge, Roberto Lemus Garza ordered the exhumation of three graves near the village San Antonio Sinache in the highlands. According to villagers, the leader of the local civil patrol, Pascual Hernandez, was in cahoots with the regional military commander who frequently called on Hernandez to dispose of suspected guerrilla sympathizers. In a meeting at his office, Judge Garza drew up an exhumation order for American forensic anthropologist Clyde Snow and Stover to excavate the graves and report our findings to the court. Judge Garza and several of fellow jurists and police investigators accompanied us to the site where, working with local informants, we uncovered the graves. Inside were three male skeletons: two of the sets of remains had blindfolds still in place and exhibited two closely-spaced, small-caliber (probably .22 long rimfire bullets) fired into the left side of the head (Americas Watch and Physicians for Human Rights 1991:75) (Figures 4, 5). The third skeleton had died from slashing blows to the back with an edged instrument, probably a machete. The findings corroborated eyewitness accounts that testified that Hernandez had abducted and killed the three men around *Semana Santa* (Easter Week) in 1984.

Guatemalan journalists gave the San Antonio Sinache story a lot of play in the national media. Gradually, it seemed, a space was opening up that would allow the families to make their demands more public. In 1991, the American Association for the Advancement of Science (AAAS) convened a forensic training workshop in Guatemala City similar to the one it had held in Argentina seven years earlier. As in Argentina, mainly archaeology and anthropology

students attended the workshop from universities in the capital. Only months before, the students had anticipated a lifetime of recovering artifacts from Mayan temples. But, by the close of the workshop, a small group of students had decided to form their own independent forensic team.

The establishment of the Guatemalan Forensic Anthropology Team in 1991 marked the turning point in the medicolegal investigation of the disappeared in Guatemala. Now local human rights and indigenous groups had the ammunition they needed to press judges to expedite the process of exhumations. Like their Argentine counterparts, the Guatemalan team struggled to respond to the requests of the nongovernmental groups as they appealed to foreign donors and foundations to help them make their rent payments and maintain a steady flow of supplies and equipment into the field (Figure 6).

As their investigations proceeded, no place had been sacred to the military executioners. In the isolated central highland town of Sand Andes Sajcabaja, the scientists unearthed several graves in the interior of a 16th-century church. Inside, next to the skeletons, were bullet casings, military food tins, playing cards, and camouflage burlap bags (Rohter 1997:5). In 1976, a severe earthquake had damaged the church, built on the site of a pre-Columbian Maya holy place, and it was subsequently abandoned. By 1980, residents recall, fighting in the surrounding hills was so intense that priests and nuns were forced



FIGURE 4. Clyde Snow examines the skeleton of Manuel Tiniquar Chitic in the hospital in Santa Cruz del Quiche, Guatemala. Snow determined that he died from slashing blows to the back with an edged instrument. (Credit Eric Stover).



FIGURE 5. Judge Roberto Lemus Garza (right) and Clyde Snow examine X-rays of the skull of one of the two murder victims exhumed near San Antonio Sinache, Guatemala in January 1991. The white spots on the X-ray film are bullet fragments. (Credit: Eric Stover).

to flee, and the Guatemalan Army moved into the roofless sanctuary, turning it into a barracks and interrogation center. Detainees taken there were never seen again.

One of the Guatemala team's most difficult exhumations took place in late 1993 (Equipo de Antropología Forense de Guatemala 1995). The graves were located in a ravine near Rio Negro, a small Achi Indian village, about 250 kilometers north of Guatemala City. The team camped at the site for three months and excavated the remains of 143 individuals. Dozens of visitors, including relatives of the deceased, policemen, local government officials, and journalists, made the nine-hour trek to the ravine to watch the scientists remove thousands of bones and artifacts

from the riverbed. In one of the more dramatic and painful moments, the scientists carefully extracted fetus bones from the pelvis area of three skeletons. Back in their laboratory in Guatemala City, the team found that all of the remains belonged to women and children, and that they had died from blows to the neck, gunshot wounds, and stab wounds from knives and machetes.

The forensic findings confirmed eyewitnesses' accounts of what had happened in Rio Negro in early 1992. It was a period commonly called *la época de la violencia* (the time of violence) in the Guatemalan highlands, a time when army and paramilitary troops, in their effort to destroy the guerrillas, moved through villages, burning homes and killing anyone suspected of being a guerrilla or sympathizer. On the day troops swept through Rio Negro, they pulled 70 men from their homes and executed them near the village. The next day, the remaining men fled into the mountains. They left behind the women and children, believing that nothing would happen to them. But, on 13 March paramilitary troops returned to the village and forced all the women and children up a ravine where they raped many of the women and then turned their guns and knives on their victims.

Two years later, on 24 April 1994, thousands of villagers gathered in the town of Rabinal to bury the remains of the Rio Negro victims. A Mayan religious leader blessed the remains that were then buried in single wooden coffins in a common grave. A small monument was erected over the burial mound, but it was later destroyed. Since then, a larger memorial has been constructed to honor the dead.

Stefan Schmitt (Pers. comm., 27 September 1998), one of the founders of the Guatemala team, describes the importance of the exhumations for the families of the victims:

A clandestine grave is not so much hidden as it is officially nonexistent. There is therefore no possibility for the families and their communities to ritualize death, as it is done in any society. The mere existence of these mass graves . . . terrorizes and oppresses the communities which have to live with them. The official exhumation of the victims is the first step toward peace for these communities. It is then that the survivors and victims of this mechanism of terror finally become activists for their rights.

In December 1996, the Guatemalan Armed Forces and the guerrillas signed a peace treaty ending their bloody 36-year civil war (Goldman 1996:A13). The treaty established a UN-mandated truth commission, known as the Historical Clarification Commission, to investigate past abuses and determine which entities among the combatants were responsible for these crimes. But the accord also contained an amnesty clause that made prosecutions difficult. Even so, the perpetrators of the Rio Negro massacre were brought to justice in 1998. In a historic ruling in December 1998, a Guatemalan court sentenced three men from a paramilitary group to death for the 1982 Rio Negro and Agua Fria massacres in which 127 adults and 142 children were killed. Guatemalan Forensic Anthropology Team member Fernando Moscoso testified as an expert witness in the trial.

The three-member commission released its much awaited report in February 1999. It con-

tained blunter language than most UN documents. The commissioners found that more than 200,000 people, mostly Mayans, were killed from 1962 to 1996, more than 93% of them by government forces. Some of the government's counterinsurgency operations, the panel concluded, could be characterized as genocide. It called for the prosecution of those responsible for the worst atrocities and recommended payment of reparations to victims' families. The report dismissed the military's claim that the massacres were the excesses of rogue soldiers and instead found that there had been a "strategy to provoke terror in the population," directed from the highest levels of government. Moreover, it charged that the US government—most notably, the Central Intelligence Agency—had played a key role in propping up Guatemala's right-wing military governments during the worst periods of repression (Commission for Historical Clarification 1999).



FIGURE 6. As residents of a village in the Guatemalan highlands look on, forensic investigators use archaeological techniques to excavate an unmarked grave. (Credit: Eric Stover).

Iraqi Kurdistan

Human rights investigators often depend on a "window of opportunity," usually lasting anywhere from a few days to weeks, when they can gain access to areas of heavy fighting to investigate allegations of atrocities. One such opportunity opened up in the northern mountains of Iraq, home to 3 million Kurds, in December 1991, two months after Kurdish resistance fighters, or *peshmerga*, had successfully completed a six-month campaign to drive Iraqi troops out of the region. After taking control of Iraqi military and government buildings, the Kurds had recovered thousands of documents detailing the abuses carried out by Iraqi military intelligence units and the secret police over the past two decades. Some police files contained tape recordings, photographs, and videotapes of torture sessions. Other documents included long, handwritten lists of political prisoners who were executed by firing squads or died under torture (Middle East Watch and Physicians for Human Rights 1992).

Tens of thousands of people disappeared in the mid-1980s during what the Iraqi authorities called their *Anfal* campaign against the Kurds. Taken from a Koranic verse, *Anfal* refers to the "plunder of the infidel," and evidently was intended to give the campaign a veneer of reli-

gious justification, though the Kurds themselves are Muslim, and Iraq is a secular state. Using a similarly destructive pattern throughout northern Kurdistan, the Iraqi army first attacked a chosen village, often with chemical weapons, captured the villagers as they tried to flee, and then pulverized their dwellings (Galbraith 1991:38-39). Men often were executed on the spot. Surviving villagers—usually women, children, and the elderly—were transferred by truck to camps lacking any provision of food, water, shelter, or medical attention. There they were abandoned. Still others were transported by truck into the desert where they were executed and buried in mass graves.

Anxious to locate the graves of the disappeared, Kurdish leaders called on international human rights organizations in late 1991 to dispatch investigators to help with the search. At the request of Physicians for Human Rights and Middle East Watch, Clyde Snow and Stover assembled a forensic team, including archaeologist Burney McClurkan, forensic anthropologist Karen Burns, and illustrator Pamela Blotner, who all traveled to Iraqi Kurdistan just as the first winter storms were sweeping in from southern Turkey.

Unlike in Latin America, the scope of our mission in Iraqi Kurdistan was somewhat limited. In Guatemala and Argentina, a local judge or a government-sponsored truth commission would have ordered investigations. But in postwar northern Iraq, the Kurds had no central authority and their allegiances were divided between two political parties, notably the Kurdistan Democratic Party (KDP) and the Patriotic Union of Kurdistan (PUK), nor was there a judiciary to speak of, let alone a functioning legislature respected by both political factions. During our ten days in northern Iraq, we were to determine whether reports of Iraqi massacres were true and, if the scope and nature of those killings, suggested that the Iraqi government had committed serious crimes under international law; namely, crimes against humanity (Bishop 1962:839-843) or the most heinous of all state-sponsored crimes: genocide (Sohn and Buergethal 1973:915).

Northern Iraq, we soon found, was in a state of precarious peace. Eight months earlier, in mid-April, the United States, Great Britain, France, and the Netherlands, acting on a plan

advanced by British Prime Minister John Major, had created a safe haven for the Kurds beginning at the Turkish border and extending south to the 36th parallel. Flying out of the U.S. base at Incirlik, Turkey, fighter aircraft patrolled the skies above the 36th parallel. The air cover was supposed to deter Iraqi air and ground attacks. Meanwhile, on the western plain of Iraqi Kurdistan, the still formidable remnants of Saddam Hussein's army waited along a 250-mile military demarcation line, stretching from Syria to Iran.

With little time to lose, we arranged for U.S. Blackhawk helicopters to fly us to the southern Kurdish city of Sulaymaniyah, just below the 36th parallel. From there, we traveled overland to Erbil. In both cities, we visited cemeteries and former Iraqi prisons and military bases where local excavations of gravesites were already underway. At four of these sites, we worked alongside Kurdish investigators as hundreds of people gathered around the graves (Figure 7). Some were simply curious, while others came with the hope that we would uncover a missing relative or friend.

By the time of our visit, the Kurds had uncovered 145 individual and mass graves near the central security prison and the Mudiriyat al-Amn, or secret police, building. Inside the police station several large steel hooks hung from the ceiling. Detainees were reportedly hung from the hooks during torture sessions. On the grounds of the prison, we found five tires filled with cement and high-caliber bullet jackets scattered about on the ground. Survivors described how hundreds of prisoners, blindfolded and with their hands tied behind their backs, had been strapped to the poles and then shot. Inside the prison we found files with photographs of Iraqi secret policemen holding up the heads of freshly executed prisoners like hunting trophies.

Our team left northern Iraq just as the deadline for the renewal of Operation Provide Comfort, the Turkey-based humanitarian operation, was expiring (Ankara renewed permission at the eleventh hour). Back in the United States, we issued a report stating that sufficient evidence existed to suggest that Iraqi forces might have committed genocide during the Anfal campaign against the Kurds. We recommended that the United Nations dispatch a team of legal and



FIGURE 7. A series of unmarked graves discovered in northern Iraq after the Anfal campaign by Iraqi forces in the late 1980s. (Credit Eric Stover).

forensic experts to conduct a more extensive investigation of these alleged crimes.

When the United Nations failed to respond to our request, Middle East Watch and Physicians for Human Rights sent a second forensic team to Iraqi Kurdistan in May and June 1992. This time the investigators focused on an execution site in the village of Koreme, not far from the border with Turkey (Middle East Watch and Physicians for Human Rights 1993:1-9). The team was led by Clyde Snow and included, among others, two members of the Argentine team—Mercedes Doretti and Luis Fondebrider—and Stefan Schmitt of the Guatemalan Forensic Anthropology Team. The investigators used a multidisciplinary approach including archaeology, forensic anthropology, ballistics, oral history, and the review of written documentation. They divided themselves into three teams, although team members shifted from one group to another depending on the need. The first team, comprised mainly of lawyers, collected oral testimonies and documentary evidence. The second team examined the skeletal remains and artifacts in the laboratory. And the third team, headed by James Briscoe, an archaeologist from Norman, Oklahoma, directed the archaeological aspects of the investigation which included general survey of the sites, mapping of salient features, controlled collection of artifacts and soil samples, and excavation of grave sites. The multidisciplinary composition of the teams' members, together with their unique methodology, was both unprecedented and standard setting.

The aim of the investigation was straightforward. By reconstructing the events that had destroyed a single Kurdish village, Koreme, and its population during the Anfal campaign of 1988, the team would be able to provide a “physical snapshot” of the fate of thousands of other villages in the northern mountainous provinces of Iraq before and during the Anfal campaign. They also hoped that their study would prompt the United Nations to take the unprecedented step of establishing an international ad hoc tribunal to investigate and prosecute those Iraqi military and civilian leaders who were responsible for crimes against humanity and acts of genocide directed against the Kurds.

Koreme is located in a small valley on the frontal range of the Zagros Mountains. The village consisted of 150 Kurdish Muslim families who tilled the fertile soil and made a comfortable living selling cereals, grains, and vegetables in local markets. On the morning of 27 August 1988, as Iraqi troops swept into the Zagros mountains and war planes circled overhead, the people of Koreme fled their village in the direction of Turkey. To evade army patrols, they avoided main roads, travelling more or less cross-country. By mid-day, they had arrived in the village of Warmeli, only hours after it had been bombed with chemical weapons. Terrified by what they saw, the villagers decided to return to Koreme.

Just outside Koreme, the villagers, exhausted from the stifling heat, were stopped by Iraqi soldiers who promptly pulled 33 men and boys of fighting age from the group. While the women, children, and elderly were led off, a group of soldiers lined up the men and boys and opened fire. Some men were killed immediately. Others were wounded, and a few were missed altogether. Remarkably, six of the men survived. The soldiers then left the execution site, without burying the bodies or otherwise touching them.

That night, after the soldiers had left with the women and children, the six men crawled out from under the bodies and escaped. A week or so later, Iraqi soldiers returned to Koreme and buried the putrefying corpses in four hastily dug graves.

Snow and his team managed to exhume and identify all 27 sets of remains (Middle East Watch and Physicians for Human Rights

1993:97-101). The remains were male, ranging in age from early teens to middle 40s. Each of the 27 had died of gunshot wounds. The primary target of the gunshots appeared to be the trunk of the body, with some indications that the executioners were aiming on a downward slant toward the front of the victims, although the pattern of wounds suggested that some victims were shot in the back or side as they involuntarily tried to twist or turn away as the volleys began.

In an effort to reconstruct the scene at the execution site, James Briscoe and two other archaeologists divided the area into two sections for controlled collection purposes (Middle East Watch and Physicians for Human Rights 1993:85-96). They established a metric grid along the firing line and collected artifacts in meter-wide strips along the baseline. Each cartridge brass was plotted according to its position along the baseline and given a numerical designation before collecting. The numerical designation was plotted on graph paper and written on the artifact as each was located and collected. Next, they established a second grid line, keyed to the firing baseline, and collected artifacts along the victim's line.

Snow sent the artifacts and all records of location and plotting to Douglas Scott, an archaeologist with the National Park Service in Lincoln, Nebraska, for ballistic analysis. Scott examined the firing pin imprints on the cartridge cases and determined that at least seven individual firearms—all semi-automatic or fully-automatic 7.62 x 39mm caliber—were used in the execution (Middle East Watch and Physicians for Human Rights 1993:103-107).

The Koreme investigation was unique. First, the forensic team was international, comprised of members from four countries: Argentina, Guatemala, Chile, and the United States. Second, the multidisciplinary approach followed in the Koreme investigation ensured that all three forms of evidence—testimonial, documentary, and physical—so crucial in criminal trials were collected and preserved. This approach would serve as a model for similar forensic investigations of mass killings in El Salvador (Argentine Forensic Anthropology Team 1992), Croatia (Stover and Peress 1998), Bosnia (Stover and Peress 1998), and Rwanda. Finally, the aim of the Koreme investigation was not only to establish the facts

surrounding the massacre in the village and to identify and return the remains to the families but to produce a body of evidence, and a methodology for collecting that evidence, which would hopefully prompt the United Nations to establish an ad hoc international tribunal, charged by the Security Council, to hear some, if not all, the offenses, based on evidence to be gathered by a special commission of inquiry. Although such a proposal was put on the agenda of the Security Council in July 1993, it has not been realized.

The Former Yugoslavia

If the Koreme investigation in northern Iraq had cast the template for future medicolegal investigations of mass killings, the Balkan wars of 1991-1995 would give forensic experts and archaeologists ample opportunity to apply it under even more harrowing and challenging conditions. "Flak jacket archaeology" is what one American archaeologist called it. He was referring to the light blue armored vests and helmets issued to all UN personnel—military and civilian alike—working in combat zones throughout the former Yugoslavia. From the onset of the Balkan wars in 1991 until the present, the United Nations, with the assistance of forensic experts from Physicians for Human Rights, has investigated dozens of cases of mass killings largely at the hands of the Bosnian Serb army and paramilitary forces (Stover 1997). These investigations have drawn on a wide range of scientists from around the globe, increasing our knowledge of how to manage large-scale exhumations ten-fold.

The rumblings of war could first be heard in Yugoslavia in the spring of 1991. Until his death in 1980, Yugoslavia's longtime dictator, Josip Broz Tito, who was half Slovene and half Croat, had welded the country's six republics—Croatia, Serbia, Bosnia-Herzegovina, Montenegro, Macedonia, and Slovenia—and two autonomous provinces—Vojvodina and Kosovo—into a whole through force of personality, the stifling of dissent, and redrawing of internal political boundaries to minimize ethnic animosities. By 1987, a shrewd politician by the name of Slobodan Milosević had emerged as the president of Serbia. He appealed to Serbian nationalism by emphasizing the use of the Cyrillic alphabet,

named for St. Cyril, who converted the South Slavs to Christianity, instead of the Latin alphabet used by Croats and Bosnians. The Serbs follow the rites of the Eastern Orthodox Church; the Croats are Roman Catholics. By playing on the grievances leftover from World War II he revived aspirations of a “Greater Serbia” which would unite all Serbs under one national flag. The ascent of Milosević and other hard-core nationalists in Serbia fanned equally noxious flames in the other republics.

In Croatia, swastikas began appearing at independence rallies, harkening back to the Croat-Nazi alliance and its henchmen, the Ustashe, who killed hundreds of thousands of Serbs and Jews during the Second World War. Croatia’s president, Franjo Tudjman, had begun adopting such traditional symbols of Croatian nationalism as the *sahovnica*, a red-and-white checkerboard flag, and the national anthem—both associated a few decades earlier with the Ustashe—provoked apprehension among Serbs in Croatia that they might become victims of the kind of bloodbath their parents or grandparents had suffered during World War II (Figure 8).

Trouble first broke out in the vicinity of Vukovar, an historic city with fine baroque buildings on Croatia’s eastern border, on 1 May 1991. That day Serbs had detained two Croat policemen who had tried to run their vehicle through a barricade in Borovo Selo, a predominately Serb suburb of Vukovar. The following day, the police sent a busload of reinforcements to rescue the two men. But the Serbs, hiding in houses and buildings at the entrance of the town, ambushed the bus, killing fifteen policemen and injuring several others. Within days, rumors that several bodies had been mutilated spread all over Croatia, adding the brewing tension.

On 25 June 1991, both Croatia and Slovenia declared their independence from Yugoslavia. Milosević ordered the Yugoslav National Army, or JNA, composed mostly of Serbian officers, to subdue the breakaway republics. The JNA first attacked Slovenia, but they met greater resistance than they had anticipated. After ten days, the Yugoslav generals abandoned their efforts in Slovenia to concentrate on Croatia. Vukovar, lying 80 miles northwest of the Serbian capital of Belgrade, took the brunt of the attack.

For 88 days, the JNA used artillery, rockets, aircraft, and naval gunboats on the Danube River

to pound Vukovar into submission. As a ragtag army of National Guardsmen struggled to defend the city, the civilian population—Croats and Serbs alike—huddled in cellars and bomb shelters built during the Tito era, as continuous barrage of shells and bombs rained down on their schools and factories and churches. On the worst days as many as 70 shells an hour fell on the battered town.

Vukovar finally fell to the JNA forces on the morning of 20 November 1991. The town was a scene of devastation: hardly a building was standing. Drunken soldiers and Serbian paramilitaries were carousing in the streets and firing their AK-47s into the air, while others were pulling Croatian civilians out of their bunkers and basements and forcing them out of the city. In the meantime, JNA troops, under the command of Army Major Veselin Sljivancanin,



FIGURE 8. Clyde Snow examines a blind folded skull from a mass grave in eastern Croatia, 1992 (Credit: Eric Stover).

had removed 200 lightly wounded soldiers and hospital workers from the municipal hospital and taken them by bus to a farm called Ovcara nine miles south of the city. As night descended, the soldiers lined up the men next to a freshly dug mass grave and opened fire.

In early 1992, Milošević and Tudjman agreed to a cease-fire and allowed the deployment of UN peacekeeping forces—formally referred to as the United Nations Protection Force, or UNPROFOR—in areas under Serb control. The UN troops were supposed to demilitarize these areas by ensuring the withdrawal of JNA forces and the demobilization of all paramilitary troops. Within months of the UN's arrival, war, like a virus, had appeared in Bosnia-Herzegovina, led by the Bosnian Serb leader Radovan Karadžić and his military commander, General Ratko Mladić. Over the next three years, military forces loyal to these two men committed the worst atrocities on European soil since World War II.

Since the onset of war in the former Yugoslavia, the warring parties (like the Iraqi and Kurdish defense forces in the late 1980s) were governed by the laws of war, or what are also referred to as international humanitarian law. This body of law is comprised, *inter alia*, of the four 1949 Geneva Conventions, the two 1977 Protocols additional to those Conventions, and the customary laws of war (Reisman and Antoniou 1994). Individual parties in any international or internal conflict can be held accountable for “grave breaches” of the Geneva Conventions. Grave breaches are defined as willful killing; torture; rape or inhuman treatment of protected persons, including biological experiments; unlawful deportation or transfer; unlawful confinement; willfully causing great suffering or serious injury to body or health; depriving a protected person of the right to a fair and regular trial; the taking of hostages; and extensive destruction and appropriation of property, not justified by military necessity and carried out unlawfully and wantonly.

UN personnel were well aware of massive violations of international humanitarian law in the former Yugoslavia soon after fighting broke out between the JNA and Croatian forces in 1991. But it was not until October 1992, when the Security Council established a Commission of Experts, that these atrocities were investigated with any real seriousness. The appointment

of the Commission was an extraordinary act. Not since the International Military Tribunal at Nuremberg had the world community taken collective action to provide for an international body to investigate violations of international humanitarian law, with a view to prosecuting its perpetrators before an ad hoc international war crimes tribunal, which was established in The Hague, Netherlands in May 1993.

In December 1992, the Commission of Experts dispatched Clyde Snow and Stover to Vukovar to conduct a brief, three-day excavation of the mass grave on the Ovcara farm. Accompanying the mission were Becky Saunders, an archaeologist from Louisiana State University, and Morris Tidball Binz, an Argentine physician and former member of the Argentine Forensic Anthropology Team. We worked quickly, aware that the Serbs might confront us at any time. As UN troops stood guard, we dug a trench 7 m long and 1 m wide until human remains were exposed. Below the skull of one of the skeletons, resting on the shoulder bones, was a silver chain bearing a Roman Catholic cross and a silver-colored medalion with the inscription: “BOG I HRVATI.” Or, in English, “God and Croats.”

Wars often result in a variety of mass burials. Victorious troops may collect enemy dead and, though a violation of the rules of war, dump them in mass graves. But the Ovcara grave had nothing to do with battlefield casualties. On the grave's northwestern perimeter were well over 75 spent cartridges of a caliber consistent with a 7.62-millimeter Red Star, a standard JNA weapon and similar to the Russian AK-47. The fact that we found cartridge casings only along this perimeter, and that there were bullet holes in the acacia trees on the opposite side, suggested that a firing squad had stood at one end of the grave shooting directly into or across it.

The war in Bosnia officially ended on 14 December 1995, leaving tens of thousands of Bosnians dead or missing and over 2 million more as refugees. On that day, the presidents of Bosnia, Croatia, and Serbia had met in Paris and signed an American-brokered peace agreement, ending nearly four years of war. The peace accord allowed for the deployment of 60,000 NATO troops, including 20,000 American soldiers. In addition to keeping the warring factions at bay, the multinational force, known as IFOR (and later as SFOR), was permitted

to detain and turn over indicted war criminals to The Hague tribunal, but determined that it would do so only if IFOR troops came into contact with suspects or if the deployment of multinational forces was obstructed by them.

During the course of the war, the Tribunal at The Hague indicted dozens of military and paramilitary officers, mostly Serbs, for war crimes and crimes against humanity. Among them were three JNA officers—Colonel Mile Mrksić, Captain Mirosalv Radić, and Army Major Veselin Sljivancanin—who were charged with ordering the massacre of the 200 hospital patients and staff on the Ovcaro farm. But the tribunal's most serious accusations were leveled against the Bosnian Serb leaders, Radovan Karadžić and Ratko Mladić. Among the offenses listed against the two men was the charge of genocide. In its indictment, the prosecutor's office said that Karadžić and Mladić were responsible, among other things, for the relentless and indiscriminate bombardment of civilians in Sarajevo, where nearly ten thousand had died during the three-and-a-half-year siege, and for the slaughter of 8,000 Bosnian Muslim men and boys as they fled the town of Srebrenica in July 1995. Never before in the years since Nuremberg had an international tribunal charged top civilian and military leaders with acts of genocide.

In June 1996, six months after the signing of the peace accord, the tribunal sent William Haglund, a forensic anthropologist from Seattle, Washington, to the Balkans to resume the investigation of the Ovcaro grave and to exhume four of nine mass graves that had been discovered in the hills surrounding Srebrenica. Over the next five months, Haglund, with the aid of Physicians for Human Rights, shuttled more than 90 scientists from 19 countries in and out of the region (Figure 9).

Among the Balkan investigators were members of the Argentine and Guatemalan forensic teams and three archaeologists—Melissa Connor, Douglas Scott, and Ralph Hartley—from the U.S. National Park Service. Hartley directed the photographic documentation of the physical evidence, while the husband and wife team of Connor and Scott directed the electronic mapping of the sites. In 1984, they had used computer mapping technology to reconstruct the events surrounding the massacre of the 263 soldiers and civilians who



FIGURE 9. United Nations forensic investigators exhume a mass grave in eastern Croatia that contained the remains of hospital patients and staff executed by Serbian forces in November 1991. (Credit: Ralph Hartley).

fell with General George Armstrong Custer at the Battle of the Little Bighorn more than a century before (Scott et. al. 1988). In 1983, a careless smoker tossed a cigarette out a car window and started a grass fire that burned the battlefield area. After the fire cleared the vegetation, visitors to the National Monument were startled to find human bone, cartridges, and other battle paraphernalia protruding from the ground. The following summer, Connor and Scott moved in with their metal detectors and electronic surveying equipment and piece-plotted the artifacts and remains scattered across the battlefield. By combining historical accounts with the results of firearms analysis and the location of artifacts on the battlefield, they were able to shed new light on the events and behavior of the fallen soldiers and their assailants at the Little Bighorn.

At the Balkan sites, Connor and Scott used a surveying station that includes a combination of transit and electronic distance meters mounted on a tripod. A metal pole is aligned directly over an object—whether the contour of a skeleton or cartridge, for example—in the grave. A beam of infrared light bounces off mirrors in a small box on top of the pole and back to the transit and distance meter, which calculates the artifact's coordinates. These are recorded in an electronic notebook and later entered into a computer, which generates a map. Not only does the surveying station save time and produce more accurate data, it also functions like a “third eye,” picking up clues that the archaeologists

might otherwise miss. Connor, for instance, was able to confirm our earlier speculation about the position of the executioners at the Ovcara site by plotting in all of the cartridge casings inside the grave. Her computerized maps also showed cartridge casings between the bodies, corroborating our informant's claim that the men had been executed in groups.

Dedicated as they were to their mission, many of the forensic investigators found the exhumations in Croatia and Bosnia far more difficult, both physically and emotionally, than anything they had previously experienced (personnel communications with various investigators September and October 1996). To begin with, the Balkan graves were larger and contained more bodies. As a result, many of the bodies, especially toward the bottom of the pits, were fairly well preserved. The grave at Ovcara had been dug five years earlier and those around Srebrenica were just over a year old. A body can decompose quickly if it is lying on the surface or buried just below it. But the deeper it is buried (and if the soil conditions are right), the more likely it will remain preserved for a longer period of time. This is especially true if the burial is near or below the water table, as was the case with many of the graves in Bosnia and Croatia.

Inclement weather, which alternated from sweltering heat to drenching rains, gnawed at the investigators' morale. At one site rain caused a fifteen-foot high wall of earth to collapse, sending workers scrambling out of the pit. There was also the gut-wrenching odor of decomposing bodies. "Constantly seeing their faces, their arms and legs contorted and twisted over one another, that's what really gets to you," a Guatemalan archaeologist, Fernando Moscoso, told me. "At night, when I close my eyes I still see them."

Another factor that contributed to the feeling of discord among some of the archaeologists during the work in Bosnia, especially those from Central and South America, was the absence of relatives of the victims at the sites. Because the Balkan graves were located in Serb-held territory, the UN feared that the presence of Croat and Muslim families could place both the relatives and the forensic investigators in danger. It was an understandable view but one which,

ultimately, dehumanized the process of exhuming the graves.

In Latin America and Iraqi Kurdistan, the families were always present at the exhumations, reminding the investigators of the human difference their work was making. During the first days of an exhumation, family members, who had heard about the digs in the press or from human rights groups, would cluster near the graves. At first, they were often reluctant to speak to the scientists—likewise, the archaeologists recognized how important it was to let the relatives approach them at their own pace and in their own way. Invariably, after a day or so, a group of women would draw near. A widow might produce a photograph of her missing husband and recount how they had first met and later married. Such encounters were extremely important for the emotional lives of the families of the disappeared. For years—and even decades—the military, police and the courts had denied them information about their loved ones. Now, in the presence of scientists whose sole aim was to establish the truth, the relatives would begin to regain a sense of control, to close the doors on false hopes, and to begin to grieve.

An exemplary incident occurred in March 1984 in Argentina. Clyde Snow and Stover, along with four members of the Argentine Forensic Anthropology Team, including Mercedes Doretti, were exhuming an unmarked grave in a cemetery near the resort town of Mar de Plata. By the end of the day, we had exposed an adult male skeleton, and certain idiosyncratic features suggested these were the remains of the 28-year-old man named Nestor Fonseca for whom we had been looking.

Mercedes was the first to notice a young blond woman in a beige jacket and blue jeans standing near the grave. The woman motioned for Mercedes, who set down her bucket and walked over to her. They talked briefly. Mercedes returned to the grave and stretched out on the ground alongside her colleagues. The woman, she said, was Nestor Fonseca's wife and she wanted to see the remains. Unsure of what to do, we mulled over the various options and decided that the wife had the right to decide for herself if she wanted to see the remains. Mercedes rose, walked to the woman, and led

her to the grave. As the woman knelt by the edge of the opening, Mercedes explained how we had identified the skeleton as her husband. Finally, the woman rose to her feet and struggled to speak. “Thank you,” she whispered. “What you are doing is wonderful.”

In the highlands of Guatemala, not just families, but entire villages would come to the exhumation sites. Before the scientists began their work, women from the surrounding villages would kneel next to the grave and pray for the deceased. Throughout the day, they would cook hot meals for the scientists and volunteer to heft buckets of earth out of the grave. In the evenings, men from the village would leave their fields and help the scientists cover the open pits with tarps and carry their shovels and picks back to the village.

By late November 1996, Haglund and his team had recovered 200 bodies from the Ovcará grave and over 500 from the four sites in Bosnia. After each body was electronically mapped to its location in the grave, it was placed in a white body bag and stored in a refrigeration container. The Ovcará remains were then taken, under UN guard, to the University of Zagreb medical school, while the Bosnian remains were taken to a makeshift morgue in an old garment factory in the town of Kalesija. At both locations, teams of forensic pathologists and anthropologists autopsied the bodies and then transferred them to the local authorities.

Using both traditional forensic methods and mitochondrial DNA testing, the scientists had identified over 120 of the Ovcará bodies by late 1998. Among one of the first sets of remains to be identified were those of Josip Kosul, a 23-year-old Croatian national guardsman who had been admitted to Vukovar Hospital with “battle wounds” on 17 November 1991. In an interview with investigators, Kosul’s mother had said her son wore a silver necklace that bore the inscription: “BOG I HRVATI.”

Unlike the Ovcará grave, the pace of the Srebrenica identifications has hardly been encouraging. At the time of writing, the forensic team in charge of the investigation has gathered antemortem information for over 80% of the missing from Srebrenica but has only been able to identify just over 60 bodies, mostly through mitochondrial DNA analysis. Even so, the findings on the cause and manner of death have

disproved claims by Serb military and political leaders that they were military casualties. Most of the men and boys bore wounds consistent with execution killings. Many of the corpses wore blindfolds and had their hands tied behind their backs. The clothing and personal items recovered from the bodies indicated that many, if not most, of the victims were Muslims, suggesting not only mass murder, but genocide.

Conclusion

Armed conflicts are increasing in number and ferocity at the end of the 20th century. There are now over 20 wars raging across the globe, and dozens of other “hot spots” which could potentially explode into violence at any moment. Meanwhile, the United Nations has finally taken its obligations seriously to prosecute war criminals. Besides the ad hoc international tribunals for the former Yugoslavia and Rwanda, the treaty for a permanent criminal court has been drafted and the International Criminal Court will be established within the next ten years to investigate war crimes, crimes against humanity, and genocide. Over the past 15 years, newly elected civilian governments in over 21 countries have established commissions—now generally referred to as *truth commissions*—to look into past abuses (Hayner 1996).

Concomitant with national and international efforts to pursue accountability and justice has been the growing demand for archaeological and forensic expertise to locate and exhume the graves of the disappeared or to verify reports of torture and other forms of violence. In June 1999, on the heels of NATO troops, the International Criminal Tribunal for the former Yugoslavia (ICTY) launched the largest international investigation of war crimes—or possibly of any crime—in history. More than a dozen forensic teams, totaling some 300 people, swept into Kosovo and set up encampments near seven massacre sites allegedly left behind by the retreating Yugoslav army and paramilitary forces. Scotland Yard, the Royal Canadian Mounted Police, and the F.B.I., all sent teams, as did police agencies from Germany, Denmark, France, the Netherlands, and Switzerland. The F.B.I. team, consisting of 64 people and 107,000 pounds of equipment, even brought heavily armed agents from its Hostage Response Team

to provide on-site security. Their mission was to investigate evidence of “crimes against humanity” as specified in the ICTY’s indictment of Yugoslav President Slobodan Milosević and four other members of his government. (Junger 1999)

As more archaeologists enter this growing field, it is becoming apparent that their training at the university and post-graduate level needs to be supplemented with courses that will better prepare them for international forensic work. Such training should be interdisciplinary and include instruction in the history of war; international humanitarian and human rights law; an orientation to the forensic sciences; physical evidence gathering protocols, including procedures for chain-of-custody; ballistics; forensic photography; military weaponry and strategy; and, most importantly, the psychosocial aspects of death and funerary rituals in varying cultures and social settings worldwide.

There is also a need to better prepare archaeologists and other scientists on missions who participate in forensic investigations organized by the United Nations and nongovernmental organizations. To begin with, sponsoring organizations should scrutinize applicants in an effort to weed out those who may be seeking an adventure and are not committed to the medicolegal and humanitarian purpose of the mission. Prior to leaving for the field, mission participants should be briefed on both the short- and long-term objectives of the mission, and be fully apprised of possible logistical and security concerns. They should receive in-depth briefings from scholars and professionals—historians, anthropologists, and journalists, among others—who are knowledgeable about the political and cultural dynamics of the country and can advise the mission participants on what the implications of their forensic work could have on postwar communities. Because mission participants will be interacting with families and local human rights organizations and government officials they should acquire a basic understanding of the local language.

If we are to “break bread with the dead”—and to act as their advocates—we must also recognize that our mission does not end there. We have an obligation to the living. It is imperative that

we develop new ways of educating the families of victims, who await anxiously for news of their loved ones, about the potential and limitations of the forensic sciences. We also need to better understand how postwar societies perceive, interpret, and respond to forensic work over time. With this information, we will be in a better position to help survivors as they rebuild shattered lives and communities.

REFERENCES

- AMERICAS WATCH
1987 *Truth and Partial Justice*. Human Rights Publications, New York, NY.
- AMERICAS WATCH AND PHYSICIANS FOR HUMAN RIGHTS
1991 *Guatemala: Getting Away with Murder*. Human Rights Publications, New York, NY.
- AMNESTY INTERNATIONAL
1981 *Guatemala: A Government Program of Political Murder*. Amnesty International Publications, London, England.
- ANDERSON, KENNETH
1993 *The Anfal Campaign in Iraqi Kurdistan: The Destruction of Koreme*. Human Rights Watch and Physicians for Human Rights, New York, NY.
- ARGENTINE FORENSIC ANTHROPOLOGY TEAM
1992 *Annual Report*. Buenos Aires, Argentina.
- BISHOP, WILLIAM W., JR.
1962 *International Law: Cases and Materials*. Little Brown and Co., Boston, MA.
- BOLES, T. CHRISTIAN, CLYDE C. SNOW, AND ERIC STOVER
1995 Forensic DNA Testing on Skeletal Remains from Mass Graves: A Pilot Project in Guatemala. *Journal of Forensic Sciences*, 40(3):349-355.
- COMMISSION FOR HISTORICAL CLARIFICATION
1999 *Guatemala: Memory of Silence*. Guatemala City, Guatemala.
- EQUIPO DE ANTROPOLOGIA FORENSE DE GUATEMALA
1995 *Las masacres de Rabinal: Estudio Historica Antropologico de las Masacres de Plan de Sanchez, Chichupac y Rio Negro*. Ciudad de Guatemala, Guatemala.
- FREUND, MARKETA
1979 The Law and Human Rights in Argentina. *Worldview*, May:37-41.
- GALBRAITH, PETER
1991 *Kurdistan in the Time of Saddam Hussein: A Staff Report to the Committee on Foreign Relations of the United States Senate*. United States Senate, Washington, DC.

- GOLDMAN, FRANCISCO
1996 In Guatemala, All is Forgotten. *New York Times*, 23 December:A13. New York, NY.
- GORLITZ, WALTER (EDITOR)
1965 *The Memoirs of Field Marshall Keitel*. William Kimber, London, England.
- HAYNER, PRISCILLA B.
1996 Commissioning the Truth: Further Research Questions. *Third World Quarterly*, 1:19-27.
- JOYCE, CHRISTOPHER, AND ERIC STOVER
1991 *Witnesses from the Grave: The Stories Bones Tell*. Little Brown, Boston, MA.
- JUNGER, SEBASTIAN
1999 The Forensics of War. *Vanity Fair*, October:138-154.
- KING, MARY-CLAIRE
1992 My Mother Will Never Forgive Them. *Grand Street*, 11(2):35-53.
- KRAUSNICK, HELMUT, AND MARTIN BROSZAT
1970 *Anatomy of the SS State*. Paladin, London, England.
- MIDDLE EAST WATCH, AND PHYSICIANS FOR HUMAN RIGHTS
1992 *Unquiet Graves: The Search for the Disappeared in Iraqi Kurdistan*. Middle East Watch and Physicians for Human Rights, Boston, MA.
1993 *The Anfal Campaign in Iraqi Kurdistan*. Human Rights Publications, New York, NY.
- NATIONAL COMMISSION ON THE DISAPPEARED
1986 *Nunca Mas*. Faber and Faber, London, England.
- PENCHASZEH, VICTOR B.
1997 Genetic Identification of Children of the Disappeared in Argentina. *JAMWA*, 52(1):16-21.
- PERERA, VICTOR
1993 *Unfinished Conquest: The Guatemala Tragedy*. University of California, Berkeley.
- REISMAN, W. M., AND C. T. ANTONIOU (EDITORS)
1994 *The Laws of War: A Comprehensive Collection of Primary Documents on International Laws Governing Armed Conflict*. Vintage Books, New York, NY.
- ROHTER, LARRY
1997 Guatemala Digs Up Army's Secret Cemeteries. *New York Times*, 7 June:5. New York, NY.
- ROJAS, NERIO
1982 *Medicina Legal*. El Ateneo, Buenos Aires, Argentina.
- SCOTT, DOUGLAS D., MELISSA CONNOR, AND CLYDE C. SNOW
1988 Nameless Faces of Custer Battlefield. *Greasy Grass*, 3:1-4.
- SHIRER, WILLIAM L.
1960 *The Rise and Fall of the Third Reich*. Simon and Schuster, New York, NY.
- SOHN, LOUIS B., AND THOMAS BUERGENTHAL
1973 *International Protection of Human Rights*. Bobbs Merrill Co., New York, NY.
- STOVER, ERIC
1997 The Grave at Vukovar. *Smithsonian*, 27(12)40-51.
- STOVER, ERIC, AND ANNE MANUEL
1991 *Guatemala: Getting Away with Murder*. Americas Watch and Physicians for Human Rights, New York, NY.
- STOVER, ERIC, AND GILLES PERESS
1998 *The Graves: Srebrenica and Vukovar*. Scalo, Zurich, Switzerland.
- ERIC STOVER
HUMAN RIGHTS CENTER
SCHOOL OF PUBLIC HEALTH
460 STEPHENS HALL NO. 2300
UNIVERSITY OF CALIFORNIA
BERKELEY, CA 94720-2300
- MOLLY RYAN
LATIN AMERICAN STUDIES
UNIVERSITY OF CALIFORNIA
BERKELEY, CA 94720-2380