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The Involvement of the Forensic Anthropologist in Human Rights Issues

**A Thesis
Presented for the
Master of Arts
Degree
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**Sarah Catherine Hughes
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Dedication

There are a few people without whom I would not have been able to generate this thesis. As my mentor and friend, Dr. Karen Ramey Burns has led by example in her efforts to expose human rights violations through the use of forensic anthropology. She has been an inspiration and a constant source of guidance and support. In 1997, I spent four months volunteering for the Guatemalan Forensic Anthropology Team. Their hospitality, generosity, friendship, and courage have had a major influence on my life. It is with the utmost respect and admiration that I dedicate this thesis to Karen and the members of the Guatemalan Forensic Anthropology Team.

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Abstract

All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood. (Universal Declaration of Human Rights, Article I)

“Todos hombres estan hermanos.” (*All men are brothers*; Inscription on the marker of a mass grave in Panzos, Guatemala)

The theme chosen for the 2001 American Academy of Forensic Sciences meeting, *War Crimes and Other Acts Against Humanity*, has highlighted the recent involvement of scientists in the investigation of gross human rights violations. Genocide, political murders, and mass killings rage throughout the world: Rwanda, Bosnia, the former Yugoslavia, Serbia, and Kosovo being only the most recent examples. Forensic anthropology is a field that was established to aid in the identification of human remains once visual recognition is lost. Most often this applies to medico-legal investigations of unexplained deaths. Of recent, however, forensic anthropologists have become involved in identifying the remains and documenting evidence of torture of victims of violent political massacres found in mass graves worldwide. Some of their work has resulted in the successful prosecution of those responsible for the killings, but most often it is to provide a sense of closure for the survivors through identification of the

dead, as many of the survivors have lived for years without knowing the fate of their loved ones. With the exception of Karen Burns' chapter in *Forensic Osteology* (see Burns 1998), there has not been a comprehensive record of the involvement of forensic anthropologists in human rights issues. With this research, I hope to survey what publications there are in this area, including information drawn from primary sources' websites, with my own experience working for the Guatemalan Forensic Anthropology Foundation. This study explores the role of the forensic anthropologist in human rights issues including the pioneers in the field and the organizations with which they are involved. A discussion of the major areas of involvement, such as Argentina, Guatemala, the former Yugoslavia, and Rwanda, is also provided as well as the methods used. Also, interaction with the local community and documentation and collection of evidence is presented drawing from my experience in Guatemala. Lastly, the impact of the exhumation process on relevant regions is mentioned along with the resulting legal trials. The future of this area of involvement is also advanced.

Table of Contents

Chapter	Page
1 Introduction: A brief history of the concept of Human Rights and the involvement of Anthropology.....	1
What are human rights?.....	1
The Universal Declaration of Human Rights.....	3
Early anthropological involvement.....	4
2 Human rights organizations in association with forensic anthropology.....	10
Non-governmental organizations.....	11
Amnesty International.....	11
Human Rights Watch.....	14
Physicians for Human Rights.....	16
Permanent regional forensic teams.....	17
Argentine Forensic Anthropology Team.....	18
Guatemalan Forensic Anthropology Foundation.....	19
Inter-governmental organizations.....	22
United Nations.....	23
3 Areas affected by gross human rights violations.....	28
What makes a country susceptible to human rights abuses?.....	28
Rwanda.....	29
The former Yugoslavia.....	32
4 Methods of forensic anthropology as applied to human rights missions.....	35
Receiving a case.....	36
Antemortem reports.....	37
Exhumation.....	38
Analysis.....	46
Documentation.....	53
5 Impact.....	59
Resulting legal trials.....	59
Effects on communities.....	64

6 Summary and future.....	72
Bibliography.....	77
Internet references.....	89
Appendices.....	90
Appendix I Model Protocol for Disinterment and Analysis of Skeletal Remains.....	91
Appendix II Argentine Forensic Anthropology Team Interview, Antemortem, and Burial Site Report Forms.....	99
Appendix III Postmortem Report Forms.....	111
Vita.....	116

List of Figures

Figure		Page
4-1	Location of a mass grave being excavated in Panzós, Guatemala 1997.....	40
4-2	Community ceremony before the removal of remains exhumed by the Argentine Forensic Anthropology Team from a mass grave in Chontalá, Guatemala 1991.....	42
4-3	Local volunteers assisting the Guatemalan Forensic Anthropology Foundation in the exhumation of a mass grave in Panzós, Guatemala 1997.....	43
4-4	Excavation process in Panzós, Guatemala 1997.....	44
4-5	Exposed remains covered after partially completing the excavation of a mass grave in Panzós, Guatemala 1997.....	45
4-6	Completed excavation of mass grave containing 35 bodies in Panzós, Guatemala 1997.....	47
4-7	Remains boxed for transport to lab facility after exhumation from a mass grave in Panzós, Guatemala 1997.....	48
4-8	Typical pattern of gunshot wounds suffered by individuals found in a mass grave in Chontalá, Guatemala 1991.....	52
4-9	Evidence of torture from a mass grave in Chontalá, Guatemala 1991.....	55
4-10	Ceremony for the reburial of remains in Chontalá, Guatemala 1991.....	58

Chapter 1

Introduction: A brief history of the concept of Human Rights and the involvement of Anthropology

What are human rights?

Human rights have gone by several terms: natural rights, universal rights, the rights of man, and simply, human dignity (Muzaffar 1999, Cranston 1973, Nickel 1987). Accordingly, there have also been many interpretations of the concept of human rights (Muzaffar 1999, Cranston 1973, Nickel 1987). Since the beginning of what we recognize as modern civilization, governmental bodies have attempted to define and legislate human rights: ancient Greek societies proclaimed citizens' rights to free speech and equality before the law, which served as a basis for the United States Constitution, the French Declaration of the Rights of Man and the Citizen, and many other such documents (Cranston 1973, Nickel 1987). In these instances, the focus has been on civil, legal, or political rights "among people who shared a common culture, held common values and lived in some degree of geographical proximity to one another" (Johnson and Symonides 1998: 39). These rights are necessarily enforceable by law and are considered positive

rights. There is a theoretical difference, however, between positive rights which are rights afforded to a person by their government, moral rights which are based on principles that may vary between cultures, and natural or universal rights which belong to man (Johnson and Symonides 1998).

Universal human rights are sometimes considered the same as biological rights—applying to those things a person needs to survive (Cranston 1973).

The idea of the fundamental rights of every man superceding the laws of his country, however, has been greatly debated by philosophers (Cranston 1973, Van Ness 1999, Robertson and Merrills 1996). When considering a concept as broad as human rights, one must take into account its subjective nature both on a government and individual level. Different countries have differing ideas of what are considered human rights according to their system of government or social structure. The notion of what constitutes fundamental or universal human rights is predominantly drawn from Western thought, however, these ideas may not be appropriate elsewhere:

the majority of the rights proclaimed in the Universal Declaration of Human Rights are the product of a bourgeois or capitalist society with little or no relevance to socialist States based on Marxist principles. Alternatively, the argument is that rights which are considered important in the developed countries of the West reflect values which are alien to the cultures of Africa and Asia, or, if their value is admitted, that they are luxuries which the people of those countries cannot afford. (Robertson and Merrills 1996: 9)

Similarly, individuals as well have an active role in determining their own cultural identity and therefore their own ideas about basic human rights: culture can be interpreted as knowledge,

Referring to what people employ to interpret and act on the world: feelings as well as thoughts, embodied skills as well as taxonomies and other verbal models [and therefore]...there are...very divergent bodies of knowledge and different ways of knowing within populations as well as between them. (Barth 1995: 66)

These opposing notions of universal human rights and diverse cultural knowledge are reconciled

by human rights decision makers that in many areas absolute uniformity is not required, provided that essential standards are respected...human rights can be universal without obliterating national differences. (Robertson and Merrills 1996: 13)

The Universal Declaration of Human Rights

In 1948, the General Assembly of the United Nations unanimously approved the Universal Declaration of Human Rights (Robinson 1958, Morins 1999, Johnson and Symonides 1998). Drafted in response to the atrocities of World War II, the document sought to define and establish a protocol as to the essential rights of man, those rights necessarily possessed by all humans simply because they are human;

the Universal Declaration states that these rights are rooted in the dignity and worth of human beings and in the requirements of domestic and international peace and security. (Nickel 1987: 4)

The modern concept of human rights is derived from this document (Nickel 1987). The declaration consists of 30 articles and includes

the right to life, liberty and security of person...[the right not to] be subjected to torture or to cruel, inhuman or degrading treatment or punishment...[or to] be subjected to arbitrary arrest, detention or exile,

the right to peaceful assembly and the right to own property (Universal Declaration of Human Rights, Articles 3,5,17,20). This document and the addendum of the International Covenants on Human Rights were revolutionary in their notion to unify the ratifying nations under one moral code and obligation. This obligation, however, does not constitute a legal authority (Johnson and Symonides 1998, Robinson 1958). The only means of enforcement are scrutiny by organizations such as Amnesty International or Physicians for Human Rights and sanctions by the United Nations (Burns 1998). To promote human rights and to aid in investigations where human rights abuses have resulted in the loss of life, forensic anthropologists have begun to apply their skills in the effort to identify the victims, detect the presence of torture, and to provide evidence for the prosecution of those responsible.

Early Anthropological Involvement

The field of forensic anthropology dates back to the early 1900s (see Stewart 1979 for review). Forensic anthropologists, however, have only

become involved in human rights investigations within the past two decades. What began as a handful of American pioneers in the early 1980s working predominantly in Latin America has increased dramatically after the widely publicized atrocities occurred in Bosnia. Now teams of forensic anthropologists and other scientists are located throughout the world working in an effort to expose human rights abuses (Burns 1998).

Dr. Clyde Snow has long been recognized as the initiator of forensic anthropology's involvement in human rights work by those working in this field. Snow began his career in Oklahoma working for the Federal Aviation Administration analyzing human remains from plane crashes (Snow 1995). His transition into human rights work came through his training of the first forensic team in Argentina in 1984 (Joyce and Stover 1991). Prior to that, prosecution of human rights violators depended largely on eyewitness testimony (Kirschner and Hannibal 1994). Snow's involvement let the physical evidence be the witness to the atrocities; "witnesses may die or disappear, but the physical evidence still will speak powerfully for them" (Geiger and Cook-Deegan 1993: 619).

A military coup in 1976 resulted in the "disappearance" of more than ten thousand people in Argentina suspected of sympathizing with rebels; "they were the victims of the Junta's self-proclaimed 'Dirty War' against what it perceived as a Marxist-inspired threat to overthrow the country" (Snow and Bihurriet 1991: 328). Then Argentinean leader President General Videla

explained 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: 42). Many of these people were tortured and died in custody. To dispose of the bodies, the military dropped them from helicopters into the Atlantic Ocean, burned them in open pits, or delivered them to municipal morgues where a military surgeon would give them a cursory glance, register them as “Ningun Nombre,” no name, and bury them in unmarked graves (Joyce and Stover 1991, Snow and Bihurriet 1991, Kirschner and Hannibal 1994).

After the initiation of democracy in 1983, it was very important to begin the search for those who had “disappeared” during the war, the “desaparecidos.” A team of physicians had been performing excavations of mass graves but had no training in the excavation process or in analyzing skeletal remains (Joyce and Stover 1991). Many of them were also involved with the very agencies responsible for the massacres and were effectively destroying evidence (Doretti 2000). Local organizations of survivors and relatives and the National Commission on the Disappeared in Argentina seeking to uncover the truth that lay within the mass graves contacted the American Association for the Advancement of Science (AAAS) for help (Joyce and Stover 1991, Snow et al 1984, Snow et al 1989, Kirschner and Hannibal 1994). The AAAS established the Science and Human Rights Program in 1976 to

defend the rights of its colleagues—scientists, engineers, health professionals and students in those fields—who may be harassed, detained or tortured or may have disappeared or been murdered...it also works to promote the use of science in human rights documentation and promotion. (Kirschner and Hannibal 1994: 454)

The AAAS sent Dr. Snow along with other forensic scientists to put a hold on the excavations in Argentina, train a new team, and supply physical evidence in the trial of those responsible for the massacres (Joyce and Stover 1991, Kirschner and Hannibal 1994). This team became known as the Argentine Forensic Anthropology Team (EAAF) and is still in operation today (see Chapter 2).

Snow has trained other teams in Guatemala in 1991 (see Chapter 2), in Chile, and the Philippines to aid in the identification of remains recovered from mass graves resulting from political violence (Joyce and Stover 1991). Snow has also participated in investigations in Sri Lanka, Chile, El Salvador, Ethiopia, Iraqi Kurdistan and the former Yugoslavia (Snow 1995).

Along the way, Dr. Snow has introduced many other anthropologists to human rights work. Stefan Schmitt was a student in archaeology visiting Guatemala when he met Snow and members of the Argentine Forensic Anthropology Team at an exhumation of a mass grave in the town of Chontola. He was able to offer his assistance through his archaeological training. Schmitt became one of the founders of the first forensic teams established in Guatemala in 1992 and worked with them for several years. He has also worked for Physicians for Human Rights and the United Nation's

International Criminal Tribunals for Rwanda and the former Yugoslavia (garnet.acns.fsu.edu/~sss4407/).

Dr. Karen Burns is another key forensic anthropologist focusing on human rights issues who came to the field through Dr. Snow. In 1986, she accompanied Dr. Snow to a meeting of the Minnesota Lawyers International Human Rights Committee. This group was recruiting forensic scientists to write a document to assist in international death investigation. This document became known as the "Minnesota Protocol," or *Manual on the Effective Prevention and Investigation of Extra-Legal, Arbitrary, and Summary Executions*, published by the United Nations in 1989; Burns authored the "Protocol for Disinterment and Analysis of Skeletal Remains" (Burns 1998, 1999, see Appendix I).

Dr. Burns was also involved in training the Guatemalan forensic team and continues to work with them in exhumations and instructing new members. She has worked throughout Latin America, the Middle East, Africa, and Haiti. In October 2000, Burns testified in Haiti for the prosecution of 58 members of the military accused of the civilian massacre that occurred in Raboteau on April 22, 1994 (personal communication 2001; see Chapter 5).

Dr. William D. Haglund is another key figure in human rights issues. He began his career in the medical examiner's office for King County in Washington state. In 1993, he joined Physicians for Human Rights, then spent a few years working directly for the United Nations. He currently serves

as Director of International Forensic Program of Physicians for Human Rights (www.phrusa.org). He has been employed by the International Criminal Tribunals for Rwanda and the former Yugoslavia as the senior forensic advisor.

The basic definition of human rights described in this chapter and the articles of the Universal Declaration of Human Rights are concepts adopted by forensic anthropologists and other organizations mentioned herewith working in the field of human rights. They are the guiding principles behind their work.

Chapter 2

Human rights organizations in association with forensic anthropologists

Many organizations of scientists, professionals, and lay people have been established to monitor, investigate, and publicize reported human rights violations:

physicians, lawyers, mathematicians, psychiatrists, psychologists, political scientists, civil engineers, and linguists are among the scientists who have formally committed to aiding human rights causes. (Burns 1998: 65)

Most of these groups are non-governmental organizations (NGOs). NGOs are independent, privately funded groups not affiliated with any government body; these include community and family based organizations, or international groups such as Amnesty International, Human Rights Watch, or Physicians for Human Rights. Some of these organizations act strictly as a supervisory body to observe countries with known or reputed human rights abuses and to publicize the events. Other groups, such as Physicians for Human Rights or regionally based forensic teams, are directly involved in the investigation and the collection of evidence for documentation of human rights violations and possible prosecution of the perpetrators. While these groups may work under an official investigation, they are not compensated in any way by the host government so as to maintain impartiality. There are also

intergovernmental agencies operating under the auspices of the United Nations working in a similar capacity to the NGOs. The groups are called upon to

provide expertise that may not be available in the country...their involvement in investigations lends some objectivity and provides moral support to local investigators, and in a small way prevents the government from investigating itself. (Kirschner and Hannibal 1994: 457)

Non-governmental Organizations

Amnesty International

Amnesty International (AI) is one of the best-known watchdog organizations and serves as a link between families with forensic needs and the experts who can help them. In December, 1977, it was the first non-governmental human rights organization to ever win the Nobel Peace Prize (Larsen 1979, Korey 1998). This immediately conveyed international importance to the protection of human rights and provided both credibility and legitimacy to the organization (Larsen 1979, Korey 1998). AI was conceived in 1961 by British lawyer Peter Benenson in response to reading of human rights violations occurring in Lisbon, Portugal (Larsen 1979, Korey 1998, Power 1981). He initially founded the organization with Eric Baker and Louis Blom-Cooper as a year long project entitled "Appeal for Amnesty, 1961" to work for the release of prisoners of conscience—those imprisoned for the

expression of religious or political beliefs (Larsen 1979, Power 1981). The publicity of the organization's efforts led to world recognition and the start of letter writing campaigns by schools, churches and community organizations to encourage the release of prisoners (Korey 1998, Larsen 1979, Power 1981). The year long initiative became the permanent organization of AI designed to obtain a fair trial for those imprisoned, to put an end to torture and

to work for the immediate and unconditional release of persons imprisoned, detained or restricted for their political, religious, or other conscientiously held beliefs, their ethnic origin, sex, color or language who have not used or advocated violence. (Korey 1998: 162)

Amnesty International currently has campaigns to stop torture and the death penalty and to protect children and women's rights. The group is also currently exposing human rights abuses in China, Saudi Arabia, Chile, and other countries around the world. With the exposure of the atrocities that occurred in Kosovo, AI has gone before the United Nations Commission on Human Rights with a draft International Convention on the Protection of All Persons from Enforced Disappearances (web.amnesty.org).

"Disappearances" affect relatives as well as the victim. The draft Convention proposes

concrete obligations for states to prevent 'disappearances' and to impose sanctions in their national legislation...[and] prevent and punish 'disappearances' as international crimes subject to universal jurisdiction...moreover, it treats the systematic and massive practice of 'disappearances' as a crime against humanity. (web.amnesty.org)

This appeal includes a clause for the repatriation of victims which would ultimately require the involvement of the anthropologist in exhumation and identification of the deceased. Amnesty International produces an annual report documenting their worldwide efforts (see web.amnesty.org).

Along with the letter writing campaigns, Amnesty International has sent delegates to various countries to personally plea for the release of certain prisoners. Both operations have met with some success, and while the liberation of prisoners of conscience is a major goal of the organization, the group is designed to research, document, and publicize information (Korey 1998). Because Amnesty International is widely known, survivors of human rights abuses and family members of those who have been killed often contact the organization looking for help. This enables AI to contact those people—forensic anthropologists, DNA experts, lawyers—who can help them (Joyce and Stover 1991). For example, in 1989, human rights lawyer, Alejandro Colanzi, sought the help of Amnesty International in the investigation of reported murders at a prison camp in Bolivia; AI referred him to Dr. Snow and the Argentine Forensic Anthropology Team who unearthed the bodies of four men and used the evidence to prosecute the prison officials responsible (Joyce and Stover 1991). Amnesty International also uses

forensic experts to evaluate medicolegal information it receives on cases it is investigating...[and] promotes the sharing of information among the medical profession about the application of the forensic sciences to human rights investigations. (Kirschner and Hannibal 1994: 455)

These efforts have also allowed other investigative organizations to further uncover and record human rights abuses.

Human Rights Watch

Human Rights Watch is another organization dedicated to exposing global human rights violations through documentation of such atrocities and the forensic work that uncovers them. In 1978, Helsinki Watch was established in response to community groups in Eastern Europe in an effort to

monitor their governments' compliance with the Helsinki Accords...[an] international agreement, created in 1975 to encourage cooperation in East-West relations, was the first to recognize 'the right of the individual to know and act upon his rights' – the right, that is, of citizens to monitor the practices of their governments. (www.hrw.org)

Americas Watch and Asia Watch were formed in 1981 and 1985 respectively and were united to form Human Rights Watch in 1988 (www.hrw.org). This organization works in conjunction with other non-governmental organizations throughout the world to support human rights work and hold governments accountable for human rights abuses committed under their jurisdiction. The group operates under the principle that only "a full public accounting of a past regime's crimes and the punishment of those responsible secures justice for victims [and] deters future [crimes]" (www.hrw.org). The ultimate goals of this group are not entirely dissimilar from those of Amnesty International, but the approach is somewhat more radical.

A central goal of Human Rights Watch is “the laying out of a permanent institutional foundation for coping with and preventing gross human rights violations and violators” (Korey 1998: 339). The group seeks to create a

permanent International Criminal Court, available to prosecute and punish those who commit genocide, crimes against humanity or war crimes... our... goal is an effective court that will uphold the rule of law on a global scale, and thus defend the rights of us all. (www.hrw.org)

Another aim of the group, however, is the cessation of human rights violations through negative publicity: an attempt to shame offending governments and the international community into compliance with international human rights standards (Korey 1998). Alarmed by the failure of the International Criminal Tribunal for the former Yugoslavia to indict and arrest all those responsible for war crimes committed in Bosnia, Human Rights Watch together with other human rights organizations and advocates initiated “Arrest Now,” a media campaign designed to compel NATO governments to bring the perpetrators to justice;

at the same time, our investigations documented how war crimes suspects who remained at large blocked the return of refugees, stifled independent political views, and endangered peace. (www.hrw.org)

Human Rights Watch is also a founder of the International Campaign to Ban Landmines, an organization that was awarded the Nobel Peace Prize in 1997. Later that same year, 132 nations signed a treaty outlawing antipersonnel mines (www.hrw.org).

Physician for Human Rights

Physician for Human Rights (PHR) is an organization of health professionals and scientists, including forensic anthropologists, established in the United States in 1986 in response to

the recognition that many human rights violations had significant health consequences...[and] that the skills of physicians, other health workers, and medical and forensic scientists are uniquely valuable in human rights investigation and documentation. (Geiger and Cook-Deegan 1993: 616)

Guided by the principles of the Universal Declaration of Human Rights (see Chapter 1), PHR employs the skills of medical professionals and forensic experts to expose human rights violations through the “exhumation of mass graves, anthropological analysis of bones, and analysis of mitochondrial DNA” (www.phrusa.org). PHR has conducted missions to more than 50 countries including El Salvador, Guatemala, Chile, Israel, Brazil, India, Burma, Iraqi Kurdistan, Rwanda, and the former Yugoslavia. These missions have included

a wide variety of health professionals: internists, pediatricians, family practitioners, surgeons, trauma specialists, epidemiologists, pathologists, forensic anthropologists, radiologists, odontologists, nurses, and social workers;

Dr. Clyde Snow operates as senior forensic anthropologist and Dr. William Haglund as Director of International Forensic Program of Physicians for Human Rights (Geiger and Cook-Deegan 1993: 617, see Chapter 1). The organization has also worked in conjunction with Human Rights Watch to

dispatch forensic experts on fact-finding missions (Kirschner and Hannibal 1994). PHR shared the 1997 Nobel Peace Prize with HRW for their efforts to ban landmines.

Permanent regional forensic teams

Independent teams of forensic experts have formed in response to human rights violations within their native countries. Many of these organizations have applied their expertise to other countries with similar problems. Teams have formed in Chile, Brazil, Colombia, Argentina, and multiple teams in Guatemala (Hannibal and Kirschner 1994). The Argentine and Guatemalan teams, being two of the first to be established, have unearthed a number of mass graves both within and outside their national borders (Burns 1998). The primary focus of these teams is the recovery and identification of disappeared individuals whose remains are most often found in unmarked mass graves. Rarely do these organizations get to present their findings to a court: amnesty is often a requirement to conduct the investigation (Snow 1995). Most importantly, the work of the forensic anthropologists provides some degree of emotional closure to the families of the disappeared through the identification of their loved ones. Through the documentation of these abuses they provide for the international community, they are able

to contribute to the historical reconstruction of the recent past, which is often distorted or hidden by the parties or government institutions which are themselves implicated in the crimes under investigation. (www.eaaf.org.ar)

The composition of one of these teams depends on the funding and the scope of the project. Minimally, a team is composed of forensic anthropologists, a photographer, and an interpreter when necessary; they may also employ experts in pathology, radiology, odontology, ballistics, genetics, computer science, and law (Burns 1998, www.eaaf.org.ar).

Argentine Forensic Anthropology Team

The formation of the Argentine Forensic Anthropology Team (EAAF) has been previously described in this work (see Chapter 1). Many of the founding members were Argentine archaeology students concerned with the state of human rights in their country: many of them had had friends and relatives disappear (Doretti 2000). Several of the original members remain working for the team. EAAF has been involved in the training and creation of other forensic teams such as the first to operate full time in Guatemala. EAAF has worked in numerous other countries where there have been severe human rights violations, including Bolivia, Chile, Brazil, Paraguay, Venezuela, Peru, Colombia, El Salvador, Panama, Honduras, Haiti, the Philippines, Romania, Croatia, Iraqi Kurdistan, Ethiopia, French Polynesia, Zimbabwe, the former Yugoslavia, Democratic Republic of Congo and South Africa (Skolnick

1992, www.eaaf.org.ar). The team has also sent members to Bosnia to investigate mass graves there for the War Crimes Tribunal (see Chapter 5). The Argentine team employs specialists in medicine, archaeology, physical anthropology, computers, and law (www.eaaf.org.ar). The group's objectives include not only the recovery and identification of victims of human rights violations for the surviving family members and to be used as evidence in court, but also act as consultants for various organizations. Members of EAAF are salaried through grants from such foundations as the Reebok Foundation, the Joyce Mertz Gilmore Foundation, the John Merck Fund, the Carter Center at Emory University, the European Human Rights Foundation, and many more; because of this funding, they do not have to charge for their work (EAAF Biannual Report 1994-1995, Doretti 2000).

Guatemalan Forensic Anthropology Foundation

The Guatemalan Forensic Anthropology Foundation (FAFG, formerly Guatemalan Forensic Anthropology Team or EAFG) was initiated in much the same way as the Argentine Team: in 1991, with funding from the American Association for the Advancement of Science, Dr. Clyde Snow along with members of the EAAF and Chilean experts organized and trained a group of anthropology and archaeology students in the forensic expertise needed to respond to the human rights crisis in their country (Skolnick 1992).

In 1954, with the help of United States forces, a military coup forcibly removed socialist President Jacobo Arbenz and instated General Castillo Armas hurling Guatemala into a long history of military rule, civil war and political violence: a struggle between indigenous Mayan populations and white, or "Ladino" land owners, a period known as "la violencia." The Ladinos maintained power in the Guatemalan government through the use of military power, most notably civil patrol units. This was a system of local "volunteers" patrolling their own villages to "protect" the people from the threat of guerillas, but actually served to "control the men who [had] to participate and to monitor the activities of the rest of the population". The Guatemalan government and local land owners sought to dominate indigenous peoples and control agricultural production (Manz 1988: 38). These civil patrols were accountable for "hundreds of acts of intimidation, kidnapping, and assassination in the mostly Indian-inhabited highlands" (Heptig 1997: 51). The violence began with individual threats and assassinations but soon led to mass killings. Guerilla movements formed and established bases of support in rural populations to stage armed opposition to repressive governmental policies. The Guatemalan army sought to put down any perceived insurgency, and in 1978, committed one of the first massacres in Guatemalan history (Manz 1988, Aguilera 1979). In Panzós, the capital of the municipality of that name in the department of Alta Verapaz, campesinos gathered in the town square to protest land rights. Armed with machine guns, military troops and farm

owners positioned themselves on the roofs of the municipal buildings. As tensions erupted, the troops opened fire on the assembly, killing over 150 and pursuing the wounded to the mountains and nearby river (Aguilera Peralta 1979, FAFG personal communication 1997). Heavy equipment was brought in to transport the bodies to the cemetery on the edge of the town. A backhoe was used to dig a massive grave at the top of the hill, and all the bodies were dumped in and covered. A monument was erected by the survivors bearing the inscription *Todos Hombres Estan Hermanos: All Men Are Brothers* (FAFG, personal communication 1997). In the massacres that followed throughout Guatemala, bodies were hidden in mass graves in remote areas and no more monuments were allowed to be erected. Still, the survivors and witnesses of these atrocities know where many of these mass graves were/are located.

Over 45,000 people have disappeared in Guatemala. The FAFG was the first forensic team in permanent operation in the country beginning in 1992 and continues their efforts today working in other countries such as Haiti and Honduras and in conjunction with the U.N. International Criminal Tribunals for Rwanda and the former Yugoslavia and Physicians for Human Rights (<http://garnet.acns.fsu.edu/~sss4407/EAFG.htm>). They have been funded through humanitarian organizations such as the Ford Foundation, the Joyce Mertz-Gilmore Foundation, the John Merck Fund and the AAAS Corporate Associate Fund (Gibbons 1992). Several other teams have also

formed to take on the formidable task of identifying the victims. Peace accords were signed in 1996 giving amnesty to previous governmental and military officials responsible for the massacres; death threats, intimidation, and executions continue. Also in 1996, the Office of the Archbishop established a forensic team to investigate further allegations of human rights abuses. After presenting the findings team in 1998, Bishop Juan Gerardi Conedera was assassinated (Green 1999).

Inter-Governmental Organizations

The role of inter-governmental organizations has been similar to that of non-governmental in monitoring countries' compliance with international human rights standards and initiating investigations into allegations of human rights violations, but they may also possess the ability to prosecute the responsible parties. Some of these organizations include

the Organization of American States, Inter-American Commission on Human Rights; the Organization of African Unity, African Commission—the monitoring body for the African Charter on Human and Peoples' Rights; the Council of Europe, European Court of Human Rights and European Commission of Human Rights,

and the United Nations (Burns 1998: 72).

United Nations

The United Nations is an organization whereby member States agree to abide by the statutes set forth in the charter (see Lawson 1991). The purpose of the U.N. is to preserve international peace and harmonious relations; to reach this goal, several organizations and working groups described below have been established under the U.N. to promote and protect human rights through investigation of specific reports of human rights violations through truth commissions and the prosecution of those responsible through the International Court of Justice (Lawson 1991).

The Commission on Human Rights was established in 1946 to submit recommendations and reports concerning various aspects of human rights including

measures to ensure compliance with universally recognized norms of human rights and... advisory services and other expert assistance to reduce the incidence of violations of human rights. (Lawson 1991: 213)

Most notably, the Commission has produced such documents as the Universal Declaration of Human Rights (see Chapter 1), the International Convention on the Elimination of All Forms of Racial Discrimination, the International Convention on the Suppression and Punishment of the Crime of Apartheid, and the Convention Against Torture and other Cruel, Inhumane or Degrading Treatment or Punishment to establish an international code of ethics (Lawson 1991).

Several working groups have been instituted by the Commission on Human Rights expressly to research and recommend to the council an accepted protocol for the promotion and protection of human rights. In 1974, the Working Group to Examine Situations which Appear to Reveal a Consistent Pattern of Gross Violation of Human Rights was set up to investigate specific reports to the Commission, consult with the governments in question, and make recommendations to the Commission. The Working Group on Enforced or Involuntary Disappearances was established in 1980 in response to reports to the Commission of disappearances worldwide. "Disappearance" is a widely used method many governments employ to quell any perceived threat or opposition. The Group determined "disappearances" to be a violation of all basic and otherwise internationally extended rights affecting not only the victims but the relatives as well. The Group investigated reports from forty different countries, and the Commission called upon these countries to

devote appropriate resources to searching for such persons and to undertake speedy and impartial investigations; to ensure that law enforcement and security authorities or organizations are fully accountable, especially in law, in the discharge of their duties, such accountability to include legal responsibility for unjustifiable excesses which might lead to enforced or involuntary disappearances and to other violations of human rights; to ensure that the human rights of all persons, including those subjected to any form of detention or imprisonment, are fully respected; and to cooperate with other governments, relevant United Nations organ, specialized agencies, intergovernmental organizations, and humanitarian bodies in a common effort to search for, locate, or account for such persons in the

event of reports of enforced or involuntary disappearances. (Lawson 1991: 398-399)

In 1988, the Working Group on Detention drafted the Declaration on the Protection of All Persons from Enforced or Involuntary Disappearances mandating each member state take measures to prevent and investigate “disappearances” and take legal action against those responsible (Lawson 1991).

Truth commissions can be initiated by a government investigating human rights violations in their own country or by the United Nations; both processes are similar. These investigations are usually established after a transition in government usually to denounce the former administration and legitimize the new (Hayner 1996, Burns 1998). While truth commissions are an official investigation, very few criminal trials result. Amnesty for former government officials is usually seen as a necessity for a new administration to take office and the investigation may be mandated not to assess blame; instead, they are an inquiry into the recent past:

a truth commission can promote reconciliation, outline needed reforms, allow victims a cathartic airing of their pains, and represent an important, official acknowledgement of a long-silenced past...it is also often hoped that this process will keep such horrors from being repeated. (Hayner 1996: 19)

Truth commissions are a temporary, officially authorized body operating for a limited time period investigating patterns of human rights abuses. These investigations may include interviewing of survivors as a fact-finding

component as well as exhumation and documentation of any mass graves; for this purpose, forensic anthropologists working in cooperation with human rights organizations are consulted. The conclusion of the process is usually a report often citing specific incidences of violations which are representative of the overall pattern (Hayner 1996, Burns 1998). The problems which may arise in conducting a truth commission include a limited time frame in which to work, gaining access to information, and attempting an investigation amidst continued political strife (Hayner 1996).

The International Court of Justice located at the Hague is the judicial arm of the United Nations used for the trial of war crimes (see Chapter 5) and other international disputes for all member States and acts as a legal consultant for various organs of the U.N. (Lawson 1991). Court members are elected by the General Assembly and apply

international conventions, international custom, the generalized principles of law recognized by civilized nations, and judicial decisions and the teachings of the most highly qualified publicists as subsidiary means for determining the rules of law. (Lawson 1991: 938, Centre for Human Rights 1988)

In 1950, the International Law Commission acknowledged the principles of international law as established in the Charter of the Nuremberg Tribunal for the prevention and punishment of war crimes and other crimes against humanity (Centre for Human Rights 1988). Forensic anthropologists have been used in such trials to provide expert testimony concerning human remains as evidence of war crimes.

These organizations work with forensic anthropologists in several different capacities to advance human rights: they serve as intermediaries between the scientists and the families of the disappeared; they use forensic anthropologists as investigators to uncover and document human rights abuses; and they use them as expert witnesses to provide testimony and evidence against those accused of human rights violations.

Chapter 3

Areas affected by gross human rights violations

What makes a country susceptible to human rights abuses?

A country may descend into a pattern of gross human rights violations for a number of reasons. Often civil ethnic wars give rise to genocide as in Rwanda. Periods of government transition, especially a military initiated overthrow, generate violence often directed toward civilians: maintaining power is contingent upon suppressing any perceived threats or insurgencies as in Argentina, Guatemala, and El Salvador (see Chapter 2). However, there is no one region in which mass human rights violations are likely to occur: abuses have taken place in such countries as Uganda, Zimbabwe, Philippines, Chile, Chad, South Africa, Nairobi, Germany, El Salvador, Ethiopia, Bolivia, Ireland, Rwanda, Guatemala, Argentina, and the former Yugoslavia among others (Hayner 1996). The United States is not exempt from perpetuating these kinds of human rights abuses either in their relations with Native Americans such as the massacre at Wounded Knee (see United States 1976a), against its own citizens as in the handling of events at Ruby Ridge, Idaho or Waco, Texas (see United States 1997 and 1996), or in its

involvement in conflicts overseas such as the killing of noncombatants in the My Lai incident in Vietnam (see United States 1976b). However, as of yet, forensic anthropologists have not been involved in investigations of these matters as issues of human rights violations, and therefore, they are not presented in this study.

Forensic anthropologists become involved in investigations into these human rights abuses either by the request and permission of surviving relatives and the host country or by force of will through an international organ such as a criminal tribunal (Haglund 2001b, see also Chapter 4). The site chosen for investigation may also be stipulated by family members or chosen because of its connection to an indictment that has already been handed down (Haglund 2001b). Most recently, International Criminal Tribunals for Rwanda and the former Yugoslavia have been enacted (see Chapter 5), and therefore a discussion of the circumstances of the conflicts and the resulting human rights violations is appropriate as an example of the two major causes of human rights abuses as described above.

Rwanda

Before colonization by Germany and Belgium, Rwanda's ethnic groups--the Hutus, the Tutsis, and the Twas--although physically distinguishable, were essentially labels: all groups shared a common

language and cultural knowledge (Destexhe 1995, Prunier 1995). The distinctions were socially imposed: sufficient wealth could elevate the status of a Hutu to that of a Tutsi (www.ictr.org, Destexhe1995). However, after Belgian colonization, ethnicity became fixed as a result of the issuance of identity cards after 1931 (www.ictr.org, Klinghoffer 1998, Destexhe 1995). This inevitably led to discrimination: the Hutus, the majority of the population, and the Twas, a small minority, believe they were the original peoples of Rwanda which in turn solidified their vie for control (www.ictr.org, Destexhe 1995). Tensions increased as a result of a history of preferential treatment of the Tutsis by German and Belgian powers (Destexhe 1995, Kilinghoffer 1998, Prunier 1995).

In 1962, Rwanda's independence was established, known as the First Republic, with the election of President Gregoire Kayibanda (Prunier 1995). Kayibanda instituted a single party system known as the Republican Democratic Movement (MDR) which abolished all Tutsi parties and intensified ethnic tension (www.ictr.org, Prunier 1995). This resulted in the assassination of Kayibanda in 1973 and the induction of Major Juvenal Habyarimana in a military coup (www.ictr.org, Prunier 1995). This Second Republic promoted ethnic conflict as a means of establishing the necessity of power (www.ictr.org). In 1975, Habyarimana initiated the National Revolutionary Movement for Development (MRND) to supplant the MDR. This party sought to establish government representation based on

population percentages; by its very nature, however, this system further subjugated Tutsis and increased conflict.

In 1982, the situation was heightened when Rwanda refused entrance to Tutsi refugees living in Uganda (Otunnu 1999a, Klinghoffer 1998). The Rwandan Patriotic Front (RPF) was formed in response and, in 1990, attacked Rwanda from the Ugandan border (Otunnu 1999b). This brought about some positive changes including the elimination of quota systems and amnesty for some prisoners (www.ictr.org). In 1991, a cease-fire was declared, and a new constitution established a multi-party system recognizing five political parties. However, violence against Tutsis continued in the countryside, and the multi-party system blurred the line between governmental branches (www.ictr.org). Government officials therefore based political decisions on party-lines instead of constitutional bases (www.ictr.org).

In 1993, the Rwandan government and the RPF signed the Arusha Accords to establish a cease-fire and power sharing among Tutsis and Hutus in government positions (Prunier 1995, Jones 1999). However, during this process, two Hutu parties formed para-military operations violating constitutional parameters (www.ictr.org). These groups also used propaganda to continue the violence against the Tutsis (Prunier 1995, Chalk 1999).

Government officials and party leaders largely ignored the Arusha Accords. In 1994, the ethnic conflict resulted in the massacre of thousands of

people in a matter of months (Klinghoffer 1998). In May of 1994, chairman of the Rwandan Patriotic Front, Alexis Kanyarengwe, appealed to U.N. Secretary General Boutros-Gali for the initiation of an international tribunal to investigate the mass killing of civilians (Klinghoffer 1998, see Chapter 5). The investigation solicited the help of forensic anthropologists worldwide (see Chapter 5).

The Former Yugoslavia

The situation in the former Yugoslavia is far more complicated. Rogel (1998) provides a detailed description of the history of the nation. The principal catalyst in the downfall of the nation lies in its shifting identities throughout history, from its inception as a Kingdom of Serbs, Croats and Slovenes in 1918 which included Bosnian Muslims, the Royal dictatorship in 1929, occupation during World War II, to Tito's new Yugoslavia consisting of six republics and two provinces: Serbia, Croatia, Slovenia, Montenegro, Macedonia, Bosnia-Herzegovina, Kosovo and Vojvodina. The nation was essentially comprised of several different cultural identities with relative local autonomy under one federal government. Tito's death in 1980 is seen as the beginning of the end of Yugoslavia, unleashing conflicts concerning economic and political autonomy and cultural distinctions among the republics that Tito had managed to control (Allcock et al 1998, Rogel 1998). This coupled with

the economic crisis and the collapse of communism in the 1980s set the stage for the breakdown in Yugoslavia (Rogel 1998).

Nationalism is another key factor in this conflict and one that often results in human rights violations (Allcock et al 1998). Yugoslavia's ethnic groups were distributed in such a way that Serbs, "the largest group (around 36 percent of the total) were widely distributed as minorities within other republics (especially Bosnia-Herzegovina and Croatia)", and Kosovo, contained within Serbia, was 90 percent Albanian (Allcock et al 1998: xiv, Rogel 1998). Ethnic tensions over control of the republics were uncontainable especially in Kosovo where nationalism had a significant role:

the classical Serbian view holds that the people who lived in Kosovo were overwhelmingly Serb until barely a few generations back... On the other hand, Albanian historians have always claimed the right of "first possession,"...that their ancestors...lived here long before the Slav invasions. (Judah 2000: 2)

Slobodan Milosevic became an important figure as head of the Serbian League of Communists in 1986 (Rogel 1998). In 1991, he and coconspirator Borisav Jovic "blocked the normal rotation to a new president [of the federal government]...and effectively brought the Yugoslav government to a standstill" (Rogel 1998: 97). In response, Slovenia and Croatia declared their independence and the war began in June.

The United Nations established the International Criminal Tribunal for the Former Yugoslavia in 1993 in response to

the humiliating treatment and mass execution of prisoners in detention camps [and] the wholesale forced displacement of civilians that came to be known as ethnic cleansing. (Allcock et al 1998: 325)

The tribunal launched their first investigation in 1994, again, using the expertise of forensic anthropologists to uncover evidence (Hollis 2001, see Chapter 5).

Rwanda and the former Yugoslavia are only two examples of a worldwide problem of human rights violations. The recent U.N. investigations, however, may signify that the international community is unwilling to ignore such evils any longer. If the trend is to initiate an increasing number of investigations into reports of human rights abuses in other countries, then an increasing number of forensic anthropologists will also be needed to aid in the inquiry.

Chapter 4

Methods of forensic anthropology as applied to human rights missions

As a result of their broad based education, anthropologists are uniquely equipped to handle investigations into human rights abuses: anthropological training prepares the investigators to look for and recognize normal burial customs...[and thus] assess what may be abnormal...and is useful in conducting interviews with families and acquaintances to obtain antemortem information, and also supplies knowledge of archaeological techniques necessary during the exhumation phase (Burns 1998: 66). This multifaceted training coupled with the specialized expertise of a forensic anthropologist assures that the examiner has the skills necessary to properly manage each stage of the investigation. It is also important to understand the social and political dynamics of the host nation, especially relations among various ethnic groups (Haglund 2001a). This is critical not only to assessing the political climate and thus the safety of the forensic team, but also it prepares the investigators to accommodate any local rituals or ceremonies that may be necessary for the community to perform prior to the exhumation and helps paint a more complete picture of the circumstances surrounding the events that led to the violence (Burns 1998, Haglund 2001a).

The techniques used by a forensic anthropologist in human rights cases are not entirely dissimilar from those used in standard forensic work; the difference lies in the scope of the mission and often limited access to information. Non-governmental teams and those working under the United Nations also employ similar methods in the collection of antemortem information and in the physical analysis. The following depiction of methods of forensic anthropology as applied to human rights missions is drawn predominantly from my experience and communication with the Guatemalan Forensic Anthropology Team.

Receiving a case

Forensic anthropologists working for non-governmental organizations such as the regional teams mentioned in Chapter 2 can only conduct exhumations of mass graves believed to be the result of political violence at the request of a relative of one of the disappeared and with permission of the local governing body (Guatemalan Forensic Anthropology Team personal communication 1997, Snow 1995). In Argentina, permission is required by law before the exhumation (Gibbons 1992). The Argentine team now conducts their own research into some of the disappearances by reviewing such documents as police or judiciary reports or hospital and cemetery records (Doretto 2000). With this information, they are often able to locate a

clandestine grave and then go to the families with the information to get the exhumation request (Doretti 2000). The team also enters this information into a database to use for future investigations (Doretti 2000). To work in an international mission, these teams are often requested by the host government or local non-governmental organizations, or international human rights groups such as Amnesty International, Human Rights Watch, or Physicians for Human Rights who have been previously contacted by surviving family members. The United Nations also works with forensic anthropologists in their investigations initiated either by request of the host country or force of will by the international community. The most important detail in receiving a case is acquiring governmental permission:

the worst human rights abuses occur in times of power struggles, and crime scenes grow old over time. But the trade-off is straightforward--a large amount of illegally obtained information that will never have a chance to be presented in court, or a lesser amount of legally obtained information that can be used for long-term goals. (Burns 1998: 75)

Antemortem reports

For the majority of victims of human rights abuses, antemortem records such as dental radiographs or other hospital records are not obtainable. Either these services are not available in these areas and therefore records never existed as in Guatemala, or they have been destroyed as a consequence of war or a direct attempt to conceal the identity

of the dead as in the former Yugoslavia (FAFG personal communication 1997, Haglund 2001b). Consequently, in order to match characteristics found in the remains discovered in a mass grave to those possessed by one suspected of having been buried there, members of the investigation conduct interviews with the surviving relatives before the exhumation and analysis to collect as much information as possible about the victim. Standardized questionnaires are used to ascertain such information as age, gender, stature, general physical characteristics, possible dental anomalies, or fractures (see Appendix II, after Burns 1999). Line drawings may also be used to indicate any trauma to the individual witnessed during the massacre such as amputations or gunshot wounds (FAFG personal communication 1997). The Argentine team also collects information pertaining to the burial site. The antemortem reports can then be used to make potential identifications of the exhumed remains.

Exhumation

While some historical information may help determine the location of a burial, the team often has to depend on the memories of the survivors. Generally though, this is a reliable source of information: while many victims of human rights abuses were secretly buried in unmarked graves, there are often witnesses and family members who have visited the site (see Figure 4-

1). The Guatemalan Forensic Anthropology Foundation is also exploring the possible utility of ground penetrating radar and other geophysical instruments (FAFG personal communication 2001).

Once a burial is located, the team must then determine if it is the grave of a massacred victim(s) or a legitimate burial. Mass graves are a good indication that there has been some criminal activity; an individual burial is not so easily classified. In this circumstance, the anthropologists look for evidence that the burial is not consistent with the cultural practices, for example, in Islamic culture, an individual is buried in a cotton shroud facing Mecca; if these elements are missing, the burial would be suspect (Burns 1998). If the burial in question were located in a cemetery, one would look for the presence of a coffin and the position of the body. In Argentina, the military would often bury individuals in cheap coffins in cemeteries; the forensic team knew that these coffins were usually used for "John Doe" individuals who were most often elderly people who had died of natural causes in hospitals and nursing homes (Doretti 2000). The remains they were finding in these coffins, however, were of young healthy individuals with signs of violent death, traits more consistent with the disappeared population (Doretti 2000).

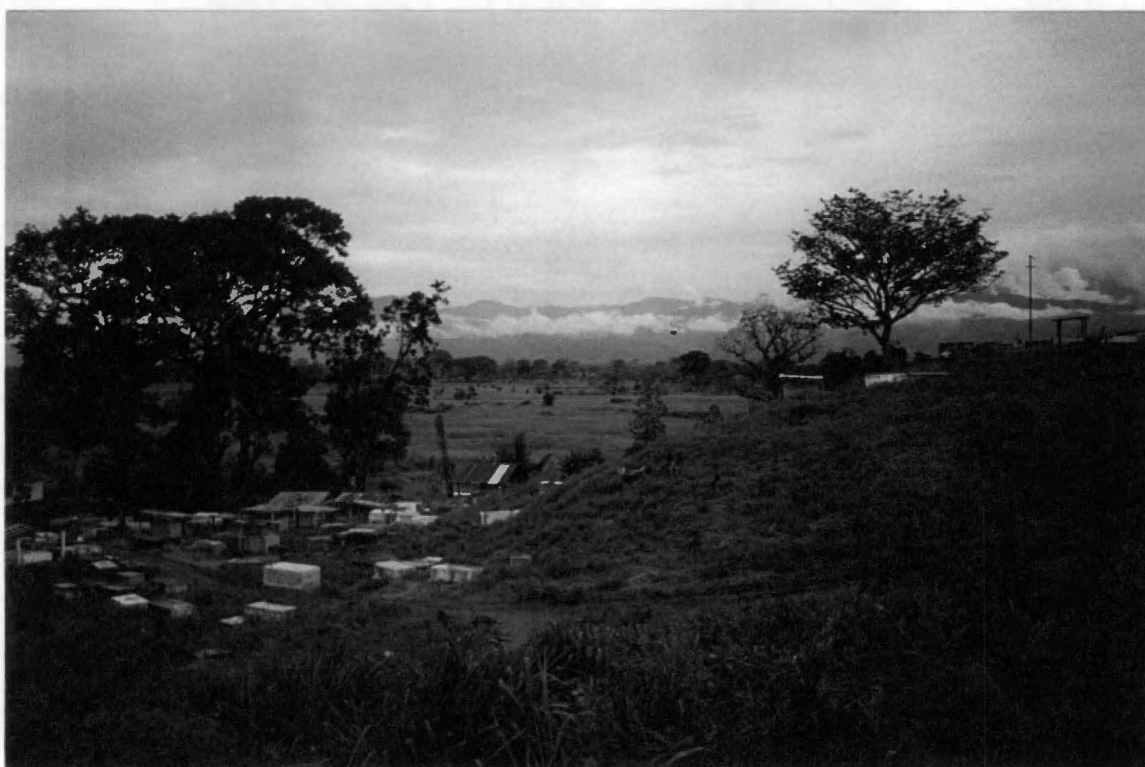


Figure 4-1 Location of a mass grave being excavated in Panzós, Guatemala
1997

Once the burial is located and determined to be relevant to the investigation, the exhumation proceeds like an archaeological excavation. However, there is often a period for prayer and religious ceremonies performed by the surviving relatives and community members before the excavation commences (see Figure 4-2; FAFG personal communication 1997). Community involvement is very important because it helps assure the relatives that the investigation and the scientists are there to uncover the truth and not to further conceal the evidence; there is often a large crowd of spectators from the community present at an exhumation (FAFG personal communication 1997). Local participation usually occurs during the excavation process. Locals volunteer and are used in the initial digging and later for screening dirt (see Figure 4-3; FAFG personal communication 1997). The site is mapped and photographed along with any uncovered remains. In a commingled burial, the anthropologist first tries to locate the skull and follow the direction of the body to uncover all of one individual at a time (see Figure 4-4). The individual is then marked with a flag, given a distinct number and photographed. An exhumation can take several weeks; the community may help build temporary structures to protect any exposed remains (see Figure 4-5). Relatives of the victims are allowed to examine the clothing and other personal effects either in the grave once all the remains have been uncovered or after everything has been removed and the clothing has been tagged (see



Figure 4-2 Community ceremony before the removal of remains exhumed by the Argentine Forensic Anthropology Team from a mass grave in Chontalá, Guatemala 1991 from *A Mayan Struggle*, by Vincent Heptig. Copyright 1997.



Figure 4-3 Local volunteers assisting the Guatemalan Forensic Anthropology Foundation in the exhumation of a mass grave in Panzós, Guatemala 1997



Figure 4-4 Excavation process in Panzós, Guatemala 1997

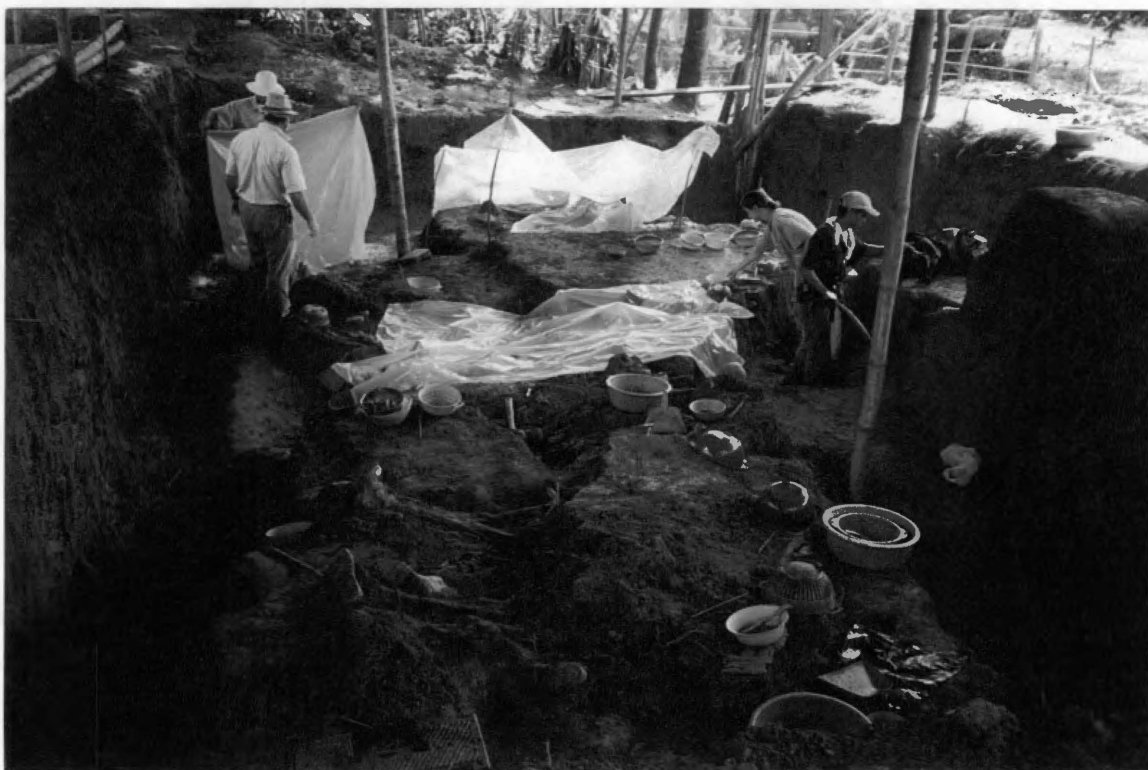


Figure 4-5 Exposed remains covered after partially completing the excavation of a mass grave in Panzós, Guatemala 1997

Figure 4-6; Boles et al 1995, FAFG personal communication 1997, Primorac et al 1996). Anything they recognize as having belonged to a family member is recorded for further comparison. Obtaining security for the site is also of extreme importance; often the judicial body sanctioning the exhumation will provide police or military protection (FAFG personal communication 1997). Once all the remains are uncovered, they may then be removed from the grave and placed in paper bags and put into separate, labeled boxes for transport to a lab facility for analysis (see Figure 4-7).

Analysis

The techniques used in the analysis phase of the forensic mission are very similar to those used in more traditional forensic anthropological laboratory cases. The remains are inventoried and their condition noted. Standard osteological methods are used to determine age, sex, and stature (Centre for Social Development and Humanitarian Affairs 1991). These features are then documented in a postmortem report for each individual (see Appendix III, after Burns 1999). Further techniques of identification may then be applied. In the former Yugoslavia, some identifications were determined through "identification cards...contact lens prescriptions, video superimposition (over the skulls) of photographs made in life,



Figure 4-6 Completed excavation of a mass grave containing 35 bodies in Panzós, Guatemala 1997



Figure 4-7 Remains boxed for transport to a lab facility after exhumation from a mass grave in Panzós, Guatemala 1997

roentgenograms of earlier bone fractures, or dental records" (Gunby 1994: 1804).

Mitochondrial and nuclear DNA comparison has also been used to make identifications in human rights cases with some success (Doretti 2000, Gunby 1994, Primorac et al 1996). However, the cost of the procedure may be prohibitive for some investigative teams (Corach et al 1997). DNA may be extracted and amplified from the bones or teeth of the victim and compared to DNA in hair or blood samples from close living relatives (Doretti 2000, Gunby 1994, Primorac et al 1996). The success rate of this method depends on the condition of the remains: many bones may not contain sufficient amounts of DNA or bacteria may deteriorate or contaminate the sample and compromise the results (Gunby 1994, Primorac et al 1996). Teeth yield a more reliable sample as they are less susceptible to bacterial degeneration (Boles et al 1995). Boles and coworkers suggest that further corroboration of DNA findings may be necessary as their research indicates that "mtDNA sequence diversity in Native American populations may be lower than that in other populations," signifying that mtDNA may be more similar among these populations than others thus making it more difficult to isolate a sequence that is sufficiently unique to make a positive identification (1995: 353).

Mitochondrial DNA has also been used to identify children of murdered parents kidnapped by the military during Argentina's "Dirty War" (Geiger and Cook-Deegan 1993, Gibbons 1992, Skolnick 1993, Raymond 1989b). These

children were “often secretly adopted, at times even by those suspected of performing the tortures and executions” (Geiger and Cook-Deegan 1993: 619). The grandmothers of the missing children were responsible for bringing about an initiative to locate these children: they originally banded together for prayer and vigil in the square outside the president’s palace, the Plaza del Mayo and later formed a group called Abuelas de Plaza del Mayo to “help find these children and reunite them with surviving relatives” (Skolnick 1993: 1913). The Argentine government has established a genetic databank to store samples from family members of children kidnapped during the war; “as the whereabouts of kidnapped victims are discovered, an attempt is made to identify each child by matching it to surviving relatives” (Skolnick 1993: 1913). Over fifty children have been identified using this method (Raymond 1989b, Skolnick 1993).

Radiology can also be a valuable tool in analysis. In human rights missions, radiology may be used

to help locate and evaluate foreign bodies accompanying, or embedded within, human remains; [to aid in the] identification of remains; [to help bring] comfort and closure to survivors through identification of remains and determination of preterminal and terminal events...[to set] the historical record straight; [to bring] perpetrators to justice; [and to bring] an end to abuse in any form as an instrument of political or religious policy. (Brogdon and Lawson 1998: 327)

Skeletal remains may be x-rayed to look for developmental anomalies or evidence of surgical procedures (Centre for Social Development and Humanitarian Affairs 1991). If radiographs taken during life are available,

such as dental films, x-rays of broken bones, or head scans, they can be compared to the remains of the deceased for possible identification.

Radiographs have been successfully used as evidence in criminal court (Fitzpatrick 1984).

During the analysis phase, ante, peri, and postmortem trauma is assessed and documented. Often a single gunshot wound to the head is found; other times there are more extensive injuries. The anthropologists look for patterns to injuries: "thirty individuals all with the same kind of pattern of wounds, or with entrances on the back of their skulls... strongly suggests execution" (see Figure 4-8; Doretti 2000).

Once the remains are fully analyzed by the forensic anthropologists, comparisons of antemortem and postmortem reports are made to determine any possible matches. This information combined with any identified clothing, DNA evidence, or other conclusive analyses may establish a positive identification (FAFG personal communication). The Argentine Forensic Anthropology Team uses three databases to cross-reference historical information, antemortem and postmortem reports to determine identifications (Doretti 2000).

(a)



(b)



Figure 4-8 Typical pattern of wounds suffered by individuals found in a mass grave in Chontalá, Guatemala from *A Mayan Struggle*, by Vincent Heptig. Copyright 1997.

Documentation

Documentation of evidence of human rights abuses is critical.

Forensic teams rely on historical accounts, trauma analysis from the remains, and ballistic evidence to recreate the scene for historical accuracy and to be used as potential evidence in a criminal trial.

Historical accounts of events leading to an incident of human rights abuse are obtained from witnesses throughout the investigation and compiled as written reports. Municipal records may also be reviewed for information pertinent to the investigation; these documents often contain records of daily events, including deaths, for the community (FAFG personal communication 1997).

Evidence of torture is also documented. If the remains are completely skeletonized, the anthropologist looks for fractures with different degrees of healing that may denote prolonged abuse and torture before death;

signs of torture which might be identified in the skeletal remains include: patterned rib fractures; amputations and/or fractures of fingers; fractures of limbs; and trauma to the teeth, such as enamel or tooth fractures. (Tidball-Binz 1998: 181, Doretti 2000)

Conclusions of torture can be drawn from similar patterns of trauma found in several individuals recovered from the same grave (Tidball-Binz 1996).

Further evidence of torture or maltreatment involves "recent and untreated septic bone erosions, and serious dental decay and periodontal disease" found in remains of persons who had obviously had previous access to health

care; this may be a result of long term detention and denial of health services (Tidball-Binz 1996: 181). Evidence of ropes, binding, or blindfolds may also be interpreted as signs of torture (see Figure 4-9).

Ballistic evidence is also analyzed and documented to determine the manner of death in some cases and to recreate the scene. Before the remains are removed from the grave, the location of any bullets or fragments is carefully graphed: while a bullet may not have damaged the skeletal remains, it may still have been the cause of death; pinpointing its exact location, therefore, is crucial (Doretti 2000). Determining the trajectory of a bullet may also be valuable as the anthropologists may determine if the victim was shot while lying down by recovering bullet fragments from the floor beneath the victim. Cartridge casing are also important in reconstructing the scene: while bullets are found in association with the remains of the victims, cartridge casings “fall on the right side immediately close to the position of the shooter...establishing possible locations of the shooters” (Doretti 2000).

Finally, determining the type of ammunition used may help identify the perpetrators. While this is sometimes done by the anthropologist, ballistic experts are usually consulted (FAFG personal communication 1997, Doretti 2000).



Figure 4-9 Evidence of torture from a mass grave in Chontalá, Guatemala 1991 from *A Mayan Struggle*, by Vincent Heptig. Copyright 1997.

Generally there are two versions of the events during a massacre: the official story is usually the victims were shot by guerilla forces or otherwise died in combat, while witnesses maintain it was an execution by government forces (FAFG personal communication 1997, Doretti 2000). Often these two groups have access to very specific and different type of ammunition (FAFG personal communication 1997, Doretti 2000). Ballistic experts are then able to confirm or refute each account.

The culmination of the antemortem reports, exhumation, analyses, and documentation is a report suitable for national or international publication or presentation to an intergovernmental body such as the United Nations or for national or international prosecution of those responsible for violations of human rights. Once everything is documented, identified remains are usually returned to relatives for proper burial (see Figure 4-10). If a trial is expected, however, the investigating team may retain the remains for use as evidence in court (Burns personal communication 2001, Argentine Forensic Anthropology Team personal communication 2000). Unidentified remains are handled differently according to the forensic team: in Guatemala, the FAFG returns all remains to the people of the community for reburial. The Argentine Team, in turn, will keep the remains for a period of time in the event they may be able to identify the victim at a later date (FAFG, personal communication

1997, Argentine Forensic Anthropology Team, personal communication 2001).

When the anthropologists present the remains to the relatives, they do so in a manner according to the families' wishes:

we always try to...ask them in what way they would like us to proceed, if they want to see the remains, if they want us to explain...how we did the identification, why we think those remains belong to their loved one...if they want us to put the remains directly [in] a coffin, or if they want to put them [in] a coffin. (Doretti 2000)

The techniques used by the forensic anthropologist in human rights missions are the same as those used in standard forensic work: the grave site is treated as a crime scene and all evidence is meticulously collected and analyzed in order to yield as much information as possible about the circumstances surrounding the incident. The approach to these scenes, however, differs in that they must allow for cultural practices and ceremonies and community involvement.



Figure 4-10 Ceremony for the reburial of remains in Chontalá, Guatemala 1991 from *A Mayan Struggle*, by Vincent Heptig. Copyright 1997.

Chapter 5

Impact

Resulting legal trials

For the amount of work that has been done by forensic anthropologists investigating human rights violations, there have been relatively few criminal trials as a consequence. Amnesty is often a requirement by local governments for any investigation to proceed. As a result, the goal of many investigations is to expose and document the truth to the satisfaction of the surviving family members or the new regime that commissioned the work. There have been, however, a few notable trials initiated by either the country of origin or an international entity as addressed later in this chapter. Forensic evidence is used to create a biological profile of the deceased and connect their deaths to the conflict under investigation.

In 1985, the government of Argentina under President Raul Alfonsin indicted nine members of the military junta in connection with the period of violence known as the "Dirty War." Three of the men were former Presidents: Jorge Rafael Videla, Roberto Eduardo Viola, and Leopoldo Galtieri (Snow 1995, Joyce and Stover 1991). Evidence and witness testimony from more than 800 people collected by the forensic team headed by Dr. Clyde Snow

was used to convict five of the men who were given sentences of twenty years to life for their involvement in the disappearance of more than ten thousand people (Snow and Bihurriet 1991, Snow 1995, 2000). This small victory, however, was short-lived: several of the junta members who were given life sentences were amnestied by Alfonsin's successor (Snow 1995, 2000). Snow's response to the pardoning was philosophical:

from the standpoint of human rights, such outcomes are deplorable. If criminals...go unpunished, what will stop others from repeating their crimes? Nevertheless, perhaps some good can be found in a country's failure to punish its worst criminals. Forgetfulness and belated, half-hearted forgiveness may be a society's best tools for healing itself. For the next generation to get on with its work, even the freshest outrages have to calcify into history. (1995)

Haiti has also managed to bring perpetrators of human rights violations to trial. In 1991, the democratically elected government under Jean-Bertrand Aristide was overthrown by a military coup, and a military government was installed led by General Raoul Cedras (www.eaaf.org.ar). During the three years of control, it is estimated that 3000 to 4000 people suspected of supporting the former government were killed (www.eaaf.org.ar). In 1994, Aristide was reinstated through international intervention. Aristide then initiated an investigation into human rights abuses committed under the Cedras administration. The Haitian National Commission for Truth and Justice called upon the services of Mercedes Doretti of the Argentine Forensic Anthropology Team and Dr. Karen Ramey Burns to collect physical evidence for use in the prosecution of those responsible (Skolnick 1995,

www.eaaf.org.ar). In October 2000, the Haitian government commenced the hearing of 58 persons from the military coup responsible for the massacre of civilians in Raboteau on April 22, 1994; 36 of the defendants were tried in absentia (Burns, personal communication 2001). For the first time, physical evidence was presented in a Haitian criminal court (Burns, personal communication 2001). Of the twenty-two defendants held in custody, sixteen were convicted, twelve of them sentenced to life terms (Colon 2000).

The proceedings of an International Criminal Tribunal differ from internal criminal trials in jurisdiction and the types of crimes for which may be prosecuted. The mandate for the International Criminal Tribunals for the former Yugoslavia and Rwanda is to restore peace, investigate, and indict (Hollis 2001). The tribunal must establish that a war crime has been committed; confirming the torture and murder of civilians is not enough. The crime must be explicitly linked to the conflict and genocide or a systematic attack of civilians must be demonstrated (Hollis 2001). The tribunals rely on the evidence collected by forensic anthropologists and other experts to indict and convict those responsible for war crimes and other acts against humanity (Hollis 2001, Cordner and McKelvie 1998). Prosecution under The Hague must also rely on international cooperation: The Hague has no means to detain or transport prisoners (Hollis 2001). Both tribunals function under one prosecutor and answer to the same appeals chamber; this guarantees uniformity to the process (Hollis 2001).

The International Criminal Tribunal for the former Yugoslavia was established in 1993 by the United National Security Council to prosecute those responsible for war crimes committed since 1991. In 1994, the first investigation was launched into the former Yugoslavia (Stover 2001). Vukovar, located in eastern Croatia, was chosen as the site for the first forensic inquiry after the war crime accusation (Haglund 2001a, Snow 1995).

The investigation concerned the disappearance of 200 Croatian patients and staff from the Vukovar Medical Center (Haglund 2001a, Snow 1995). An informant asserted that Serbian forces detained any lightly injured males from entering the hospital and instead loaded them onto buses and took them out to a cornfield and executed them (Snow 1995). In October of 1992, a preliminary investigation team arrived at the site and found remnants of clothing in the area; in December, they recovered some remains and jewelry indicating the victims were Catholic and therefore presumably Croatian (Haglund 2001a). In 1993, the team encountered some difficulty when the local Serbian general denied permission for work to continue, however, the team was able to proceed in 1996 (Haglund 2001a). The investigation determined that 129 of the victims were men and 2 were women; 192 were shot, three died of miscellaneous trauma, and five died of unknown causes (Haglund 2001a). There are currently more than 25 trials or indictments pending against individuals, including Slobodan Milosevic in his authority as President of the Federal Republic of Yugoslavia, Supreme

Commander of the Yugoslav Army, and President of the Supreme Defence Council, accused of war crimes in connection with the conflict in the former Yugoslavia (www.un.org/icty). Serbian prosecutors have indicted Milosevic under charges of corruption.

A United Nations Security Council Resolution established the International Criminal Tribunal for Rwanda in 1994 to prosecute the organizers and leaders of the genocide in Rwanda in 1994 (www.un.org/icty). The investigation was by force of will as Rwanda did not vote for the Tribunal because they wanted the trial held in Tanzania and not at The Hague (Haglund 2001b). An outbreak of cholera among the persons responsible for the genocide brought international aid into the country and exposed the atrocities; nearly 800,000 people are thought to have been executed (Haglund 2001b, Stover 2001). In 1995, the first forensic investigation was launched headed by Dr. William Haglund. A church in Kibuye was chosen as the site for the initial inquiry as it was connected to the indictment of the governor of the province, Dr. Kayishema (Haglund 2001b). Traditionally, churches and stadiums were places of refuge during conflict; Kayishema is accused of routing people to these locales and organizing troops to execute them there (Haglund 2001b). It is estimated that two to four thousand people were trapped in Kibuye and killed. Twenty-two months after the massacre, the tribunal launched its investigation (Haglund 2001b).

The planning stage for the investigation into the massacres at Kibuye Catholic Church took six months, topographic maps of buildings and bodies were made; assessments of anti-personnel mines were carried out; and ultimately, 493 bodies were recovered (Haglund 2001b). Seventeen leads to identification were uncovered: six identification documents were found, and eleven clothing items were identified by the people from surrounding villages including the clothing from two priests (Haglund 2001b). Only two families were found to supply DNA samples; all others had either fled or were killed themselves (Haglund 2001b).

There are currently over forty cases pending against political, military, media leaders, and other government personnel in connection to the genocide in Rwanda (www.un.org/ictt). On May 21, 1999, Kayishema and his coconspirator were sentenced to life terms for their involvement in the massacre at Kibuye (Haglund 2001b, www.un.org/ictt).

Effects on Communities

For this study, two major areas of impact on communities will be considered: the social consequences of the political violence and the effects of the exhumation process itself on stress and disease. These areas of research carry implications beyond the scope of this study but must be mentioned for a comprehensive analysis.

In the field of medical anthropology, the effects of stress as a disease agent have been widely researched especially since the 1980s (Dressler 1996, Heim et al 2000, Hollander 1992, Pérez-Sales et al 2000, Quirk and Casco 1994). Stress is created not only by a circumstance of events but also the emotional interpretation of those events by the individual: emotion then is “not...the product of individual psychobiology but...embedded in culturally constructed and historically situated social relations” (Tully 1995: 1598). This research is centered on

those social and psychological factors that are related to health outcomes, independent of behavioral factors that mechanically increase individual exposure to physical or chemical insults (e.g., smoking, poor diet). It is well established that a portion of the risk associated with the development of diseases such as depression, hypertension, and coronary heart disease is due to the social and cultural circumstances in which a person lives, as well as the beliefs and attitudes held by that person. (Dressler 1996: 254)

In this matter, stress is characterized as “the simultaneous confluence of environmental demands and inadequate resources for adaptation” (Dressler 1996: 255). Acute stressors are those events that “include both major points of crisis or transition in the life cycle, such as the death of a spouse or child” and may lead specifically to mental illness (Dressler 1996: 256). The practice of “disappearances” by the state fits this definition of an acute stressor. Psychoanalysis research in Argentina has demonstrated the mental effects this practice can have on surviving family members:

not only did this sinister practice impose a constant state of threat on the population, so that many individuals remained in a permanent

condition of confusion with paranoid-schizoid anxieties that inhibited or limited mental functioning, but those who actually suffered the disappearance of loved ones could at best only partially work through the mourning process necessary for healthy mental functioning following traumatic loss. In contrast to the death of a relative or close friend, which usually stimulates community recognition of the significance of the deceased individual's life and death, when someone disappears as the result of governmental action it leaves family and friends in a state of terrifying uncertainty, with no possibility of psychological closure... Not knowing about the actual fate of the disappeared person produces an intrapsychic elaboration that includes fantasies of the possible torments to the disappeared person's mind and body, fantasies based on knowledge of the existence of secret concentration camps and other centers of torture... arrested mourning often produced many apparently unrelated symptoms, such as psychosomatic illness, interpersonal conflicts, the inability to maintain healthy relationships, or a general alienation from one's immediate social group or the society at large. (Hollander 1992: 282-283)

Research has also indicated "high levels of sociopolitical violence [are] associated with an approximately fivefold increase in risk of pregnancy complications...among otherwise healthy women [in Chile]" (Zapata et al 1992: 689). Studies have also shown an increase in symptoms associated with post traumatic stress disorder among families of the disappeared, and "children related to a disappeared person [show] significantly more mood changes, problems in school and prolonged bed wetting [in comparison to children experiencing death of a relative under normal circumstances]" (Quirk and Casco 1994: 1677). This increased stress may be a result of the prolonged mourning process or

the atmosphere of fear and isolation in which families of the disappeared are subjected to... as indicated by their reports of continued harassment from the authorities and damaged community

relations as a result of the disappearance. (Quirk and Casco 1994: 1679)

Political violence resulting in the massacre of dozens, if not hundreds of individuals, from one village, has drastically altered the social structure of these communities (Green 1999). Social structure is defined as “the set of norms and values that define the range of behaviors and kinds of interactions permissible within a culture for specified classes of individuals” (Dressler 1996: 260). The social changes the indigenous peoples of Guatemala underwent as a result of the political violence directed toward them is appropriate as an example using the research of Green (1999) and Zur (1998). After the period of la violencia in Guatemala, the male population was drastically reduced causing women to have to take over some of the formally male dominated roles. This was seen as unnatural, especially in the realm of religious duties. Under traditional Mayan religious custom women and men shared roles. There were an equal number of men and women operating as religious leaders but each gender held specific duties. Both sexes operated as diviners, or healers: men handled community affairs, women worked with individuals, either with children or as midwives. Women performing in male healer roles after la violencia were seen as going against their destiny and were often not trusted.

One of the biggest impacts of la violencia was the drastic rise in women as widows. Widowhood was rare until la violencia: women’s life

expectancy was lower than men's. Traditionally, widowhood was a community matter: "village elders directed disposal of any land, property, and children" (Zur 1998: 59). The women would either return to their natal households or maintain their marital land. Women were supported by their families until they could remarry and were supposed to remarry as soon as possible to restore their "full adult status". Support or remarriage was not readily possible after the mass slaughter of Indian men. Widows were often harassed and isolated. The state, and sometimes their own villages, would not accept these women as widows for that would be admitting that their husbands had been murdered. The women were thus unable to fulfill their role as widows, afraid to call too much attention to their plight for fear that they would be thought the wife of a guerilla in hiding and executed themselves. Their families were often too overburdened to support them financially. Women were restricted in work they could find, limiting their income potential: barriers existed to women's cultivation of corn, and they often had to employ male laborers or their sons who were usually too young to work. Widows could earn a meager income through the production and sale of textiles at market or work as seasonal agricultural laborers. With lack of community support, war widows have formed bonds and alliances with other women of the same circumstances; in the late 1980's, widows joined forces to form political movements, most noticeably the National Coordination of Guatemalan Widows (CONAVIGUA) demanding basic rights and

compensation (Green 1999, Heptig 1997). This new social support system may help decrease the impact of political violence as an acute stressor, but the magnitude of the crisis and the upheaval of social structure still warrants attention due to the implications for health issues.

While much research has been done on the social consequences and health outcomes resulting from state-sponsored violence, little has been done on the impact of the investigation and exhumation process itself. Before an exhumation begins, there is much anticipation within the community.

Relatives often have high expectations of the recovery and identification of their loved ones (Stover 2001, Hollis 2001). The reality however, is that the mandates of the criminal tribunals necessitate only a biological profile of the victims, i.e., age, sex, ethnicity, and cause of death, and time constraints may not allow for the planning necessary to collect enough antemortem data or DNA samples to positively identify the majority of victims recovered (Stover 2001, Simmons and Haglund 2001). Presumptive identification, based on the testimony of relatives who believe they know the location of their loved one or who identify their remains based on personal effects, is not provided for in the mandate (Simmons and Haglund 2001). Even for those investigations not conducted under the criminal tribunals, the limitations of forensic work in conditions where there is little antemortem information, remains have been transported, reburied, or partially destroyed may preclude positive identification (Doretto 2000, Haglund 2001a). Work needs to be done on

making more of a connection to the community and developing a strategy for informing families that identification may not be possible (Stover 2001).

The exhumation process can be a mixed blessing for many of the surviving relatives: many people are afraid to see the bodies and have their worst fears of what may have happened to their loved ones confirmed but feel satisfied at having their memories verified while invalidating the official truth (Zur 1998). Exhuming the mass graves may also resurrect feelings of revenge and intensify grief; one widow at the exhumation of a grave in Guatemala expressed that “she had been on the verge of dying of sadness” (Zur 1998: 289). The exhumation may also conclude that a loved one thought to be buried within the grave is in fact not there. This revelation may increase feelings of uncertainty and anxiety and increase health risk:

whereas the women could see what happened to the cadavers of their relatives, we do not know what happened with my father, whether he was buried or merely chucked into some ravine somewhere. This is why we began a sadness too...we were most sad when they did these exhumations because, unlike these women who know where their cadavers are and that their bones are now buried, we do not. We have no idea where they took my father...Even if we found a little bit of bone, at least we would know where he was but we don't know and this is what is most difficult; this is why we have suffered so much sadness since the exhumation...[My mother] got ill from it all... She got an excruciating pain in her head and a pain in her heart which was because of sadness... She still suffers from it today. (Zur 1998: 293)

The anxiety does not end once the exhumation concludes. The remains are removed to a lab facility often for a period of several months (FAFG personal communication 1997). This can create a sense of

disappointment among the surviving relatives, replacing their excitement with the renewed sense of fear of persecution by those responsible for the massacres who remain in the community (Zur 1998).

Ideally, every human rights mission would end in a trial and perpetrators of the abuses would be held accountable. Although this is not the case, the work of the forensic anthropologist in human rights issues provides some degree of emotional closure for the families and international recognition of the events. Forensic anthropologists are only beginning to effects their work has on the host communities (Stover 2001). This is an important issue because if one of the major goals of this work is to give a sense of finality to the survivors, then the investigators need to follow up on these communities after the inquiry is complete to assess any negative consequences their work may have on the community.

Chapter 6

Summary and Future

After the Nuremberg Trials in 1946 exposed the extent of the human rights abuses perpetrated during the Holocaust, people believed that such atrocities could never occur again. However, genocide and the torture and massacre of civilians in openly declared civil wars or clandestine “dirty wars” have persisted throughout the world. For more than twenty years, forensic anthropologists have used their versatile training and specialized expertise to assist in the effort to uncover gross human rights violations through the location and exhumation of mass graves resulting from political violence, identification of the victims, and providing evidence for use in the prosecution of the perpetrators.

While the techniques used in analysis are becoming more refined, anthropologists and forensic teams are facing new problems in the field of human rights. DNA comparison has proved to be immensely useful in determining identification; however, extensive planning to locate families of the victims and determine who is missing and alive versus who is missing and dead must be done before an exhumation begins (Haglund 2001a). However, such a comprehensive planning stage and the laboratory analysis may be cost prohibitive to some forensic teams (Corach et al 1997). Perpetrators of war crimes are increasingly aware of the capabilities forensic

investigations and are making more of an effort to conceal their crimes by returning to burial sites to destroy the remains or transporting the remains to a secondary site, such as the case in Kosovo, which further complicates forensic investigation (Doretti 2000, Haglund 2001a). Rapid response of investigative groups once the inquiry has been authorized may help prevent the destruction of remains or their removal from primary burials which may hinder identification and evidence collection processes (Haglund 2001a).

Further training and expansion of forensic work is also necessary. Setting up more in-country forensic infrastructure such as the Guatemalan and Argentine forensic anthropology teams will help ensure continuing forensic investigation in countries with the most severe human rights violations (Haglund 2001a). There is also a need to address and respond to countries such as Sierra Leone and Cambodia that have ongoing and ignored forensic needs: many countries have been subjected to gross human rights violations involving the massacre of civilians but have not yet investigated any of these issues (Haglund 2001a).

Forensic investigations under the International Criminal Tribunals for Rwanda and the former Yugoslavia and the worldwide focus on war crimes and other acts against humanity may indicate a shift from granting amnesty to the prosecution of those responsible. Hollis (2001) even suggests there is a need for more than one criminal tribunal for the former Yugoslavia and Rwanda to prosecute those perpetrators who remain free and to prevent

vigilante justice. Efforts need to be made to ensure the competence and strength of potential evidence for criminal prosecution. With more work being done by different groups, there is a need to make the identification process uniform—to set standards for presumptive identification. United States standards for positive identification from a legal standpoint are too high and unrealistic for international work, and standards do not exist for presumptive identification (Simmons and Haglund 2001). There is also a need to assess the reliability of witness testimony, as in some cases it has been decades since the commission of the crime, to ensure the competence of its use as evidence in court (Simmons and Haglund 2001).

The issue of positive versus presumptive identification also warrants attention. The relatives' need for positive identification of their loved ones has been overlooked by the mandates for the International Criminal Tribunal for Rwanda and the former Yugoslavia: their goals are to ascertain a biological profile—if the victims were civilians or combatants, men or women, cause and manner of death, and any indication of religious affinity (Stover 2001, Simmons and Haglund 2001). Including presumptive or positive identification in the mandate for the criminal tribunals may lend more support to the body of evidence against the perpetrators and at the same time provide resolution for the surviving family members and therefore eventually reducing the traumatic effects of human rights abuses on the communities (Simmons and Haglund 2001). Again, a more extensive planning stage is critical: three years of DNA

and antemortem data collection in Croatia yielded a greater number of positive identifications than from previous investigations in other countries such as Bosnia (Simmons and Haglund 2001). Greater preparation may also help fill the humanitarian vacuum by making more of a connection to the community by assessing and responding to their social and emotional needs (Haglund 2001a).

While the forensic anthropologists' efforts may help provide a sense of closure for the surviving relatives, there needs to be more of a focus on the impact on the community not only from the atrocities of war but also from the actions of the forensic anthropologist. Little is known about the social reaction or the psychological effects on survivors as a result of the exhumation process of a mass grave and the removal of remains. Further research into the cultural impact of war crimes such as the massacre of whole villages needs to be assessed in terms of health effects, shifting social roles, and community structure. A cultural anthropologist or psychologist may best be suited to address these research proposals as they have the training necessary for ethnographic research and analysis of trauma and its related health effects.

As more work is done, DNA techniques will become more refined and analysis possibly more affordable; problems concerning standardizing methods may become resolved simply as a result of an increasing need for further investigations. The involvement of the forensic anthropologist in

human rights issues is critical to each stage of the investigation: preparation, exhumation, analysis and documentation. Their expertise also provide for the scientific analysis and presentation of physical evidence for use in trial. A concerted effort, however, must be made to reconcile the expectations of the community and family members and the reality of tribunal mandates and the limitations of forensic work. Further research into the effects of political violence and the resulting investigations may also help to provide resolution to surviving relatives and bridge the gap between working with the living and the dead.

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APPENDICES

Appendix I

**Model Protocol for Disinterment and Analysis of
Skeletal Remains**

Reproduced from *Manual on the Prevention and Investigation of Extra-Legal,
Arbitrary and Summary Executions*, United Nations Publication 1991.

V. MODEL PROTOCOL FOR DISINTERMENT AND ANALYSIS OF SKELETAL REMAINS

A. Introduction

This proposed model protocol for the disinterment and analysis of skeletal remains includes a comprehensive checklist of the steps in a basic forensic examination. The objectives of an anthropological investigation are the same as those of a medicolegal investigation of a recently deceased person. The anthropologist must collect information that will establish the identity of the deceased, the time and place of death, the cause of death and the manner or mode of death (homicide, suicide, accident or natural). The approach of the anthropologist differs, however, because of the nature of the material to be examined. Typically, a prosecutor is required to examine a body, whereas an anthropologist is required to examine a skeleton. The prosecutor focuses on information obtained from soft tissues, whereas the anthropologist focuses on information from hard tissues. Since decomposition is a continuous process, the work of both specialists can overlap. An anthropologist may examine a fresh body when bone is exposed or when bone trauma is a factor. An experienced prosecutor may be required when mummified tissues are present. In some circumstances, use of both this protocol and the model autopsy protocol may be necessary to yield the maximum information. The degree of decomposition of the body will dictate the type of investigation and, therefore, the protocol(s) to be followed.

The questions addressed by the anthropologist differ from those pursued in a typical autopsy. The anthropological investigation invests more time and attention to basic questions such as the following:

- (a) Are the remains human?
- (b) Do they represent a single individual or several?
- (c) What was the decedent's sex, race, stature, body weight, handedness and physique?
- (d) Are there any skeletal traits or anomalies that could serve to positively identify the decedent?

The time, cause and manner of death are also addressed by the anthropologist, but the margin of error is usually greater than that which can be achieved by an autopsy shortly after death.

This model protocol may be of use in many diverse situations. Its application may be affected, however, by poor conditions, inadequate financial resources or lack of time. Variation from the protocol may be inevitable or even preferable in some cases. It is suggested, however, that any major deviations, with the supporting reasons, should be noted in the final report.

B. Proposed model skeletal analysis protocol

1. Scene investigation

A burial recovery should be handled with the same exacting care given to a crime-scene search. Efforts should be co-ordinated between the principal investigator and the consulting physical anthropologist or archaeologist. Human remains are frequently exhumed by law enforcement officers or cemetery workers unskilled in the techniques of forensic anthropology. Valuable information may be lost in this manner and false information is sometimes

generated. Disinterment by untrained persons should be prohibited. The consulting anthropologist should be present to conduct or supervise the disinterment. Specific problems and procedures accompany the excavation of each type of burial. The amount of information obtained from the excavation depends on knowledge of the burial situation and judgement based on experience. The final report should include a rationale for the excavation procedure.

The following procedure should be followed during disinterment:

- (a) Record the date, location, starting and finishing times of the disinterment, and the names of all workers;
- (b) Record the information in narrative form, supplemented by sketches and photographs;
- (c) Photograph the work area from the same perspective before work begins and after it ends every day to document any disturbance not related to the official procedure;
- (d) In some cases, it is necessary to first locate the grave within a given area. There are numerous methods of locating graves, depending on the age of the grave:
 - (i) An experienced archaeologist may recognize clues such as changes in surface contour and variation in local vegetation;
 - (ii) A metal probe can be used to locate the less compact soil characteristics of grave fill;
 - (iii) The area to be explored can be cleared and the top soil scraped away with a flat shovel. Graves appear darker than the surrounding ground because the darker topsoil has mixed with the lighter subsoil in the grave fill. Sometimes a light spraying of the surface with water may enhance a grave's outline;
- (e) Classify the burial as follows:
 - (i) Individual or commingled. A grave may contain the remains of one person buried alone, or it may contain the commingled remains of two or more persons buried either at the same time or over a period of time;
 - (ii) Isolated or adjacent. An isolated grave is separate from other graves and can be excavated without concern about encroaching upon another grave. Adjacent graves, such as in a crowded cemetery, require a different excavation technique because the wall of one grave is also the wall of another grave;
 - (iii) Primary or secondary. A primary grave is the grave in which the deceased is first placed. If the remains are then removed and reburied, the grave is considered to be secondary;
 - (iv) Undisturbed or disturbed. An undisturbed burial is unchanged (except by natural processes) since the time of primary burial. A disturbed burial is one that has been altered by human intervention after the time of primary burial. All secondary burials are considered to be disturbed; archaeological methods can be used to detect a disturbance in a primary burial;

(f) Assign an unambiguous number to the burial. If an adequate numbering system is not already in effect, the anthropologist should devise a system;

(g) Establish a datum point, then block and map the burial site using an appropriate-sized grid and standard archaeological techniques. In some cases, it may be adequate simply to measure the depth of the grave from the surface to the skull and from the surface to the feet. Associated material can then be recorded in terms of their position relative to the skeleton;

(h) Remove the overburden of earth, screening the dirt for associated materials. Record the level (depth) and relative co-ordinates of any such findings. The type of burial, especially whether primary or secondary, influences the care and attention that needs to be given to this step. Associated materials located at a secondary burial site are unlikely to reveal the circumstances of the primary burial but may provide information on events that have occurred after that burial;

(i) Search for items such as bullets or jewellery, for which a metal detector can be useful, particularly in the levels immediately above and below the level of the remains;

(j) Circumscribe the body, when the level of the burial is located, and, when possible, open the burial pit to a minimum of 30 cm on all sides of the body;

(k) Pedestal the burial by digging on all sides to the lowest level of the body (approximately 30 cm). Also pedestal any associated artifacts;

(l) Expose the remains with the use of a soft brush or whisk broom. Do not use a brush on fabric, as it may destroy fibre evidence. Examine the soil found around the skull for hair. Place this soil in a bag for laboratory study. Patience is invaluable at this time. The remains may be fragile, and interrelationships of elements are important and may be easily disrupted. Damage can seriously reduce the amount of information available for analysis;

(m) Photograph and map the remains *in situ*. All photographs should include an identification number, the date, a scale and an indication of magnetic north;

(i) First photograph the entire burial, then focus on significant details so that their relation to the whole can be easily visualized;

(ii) Anything that seems unusual or remarkable should be photographed at close range. Careful attention should be given to evidence of trauma or pathological change, either recent or healed;

(iii) Photograph and map all associated materials (clothes, hair, coffin, artifacts, bullets, casings etc.). The map should include a rough sketch of the skeleton as well as any associated materials;

(n) Before displacing anything, measure the individual:

(i) Measure the total length of the remains and record the terminal points of the measurement, e.g. apex to plantar surface of calcaneus (note: This is not a stature measurement);

- (ii) If the skeleton is so fragile that it may break when lifted, measure as much as possible before removing it from the ground;
- (o) Remove all elements and place them in bags or boxes, taking care to avoid damage. Number, date and initial every container;
- (p) Excavate and screen the level of soil immediately under the burial. A level of "sterile" (artifact-free) soil should be located before ceasing excavation and beginning to backfill.

2. Laboratory analysis of skeletal remains

The following protocol should be followed during the laboratory analysis of the skeletal remains:

- (a) Record the date, location, starting and finishing times of the skeletal analysis, and the names of all workers;
- (b) Radiograph all skeletal elements before any further cleaning:
 - (i) Obtain bite-wing, apical and panoramic dental X-rays, if possible;
 - (ii) The entire skeleton should be X-rayed. Special attention should be directed to fractures, developmental anomalies and the effects of surgical procedures. Frontal sinus films should be included for identification purposes;
- (c) Retain some bones in their original state; two lumbar vertebrae should be adequate. Rinse the rest of the bones clean but do not soak or scrub them. Allow the bones to dry;
- (d) Lay out the entire skeleton in a systematic way:
 - (i) Distinguish left from right;
 - (ii) Inventory every bone and record on a skeletal chart;
 - (iii) Inventory the teeth and record on a dental chart. Note broken, carious, restored and missing teeth;
 - (iv) Photograph the entire skeleton in one frame. All photographs should contain an identification number and scale;
- (e) If more than one individual is to be analysed, and especially if there is any chance that comparisons will be made between individuals, number every element with indelible ink before any other work is begun;
- (f) Record the condition of the remains, e.g. fully intact and solid, eroding and friable, charred or cremated;
- (g) Preliminary identification:
 - (i) Determine age, sex, race and stature;
 - (ii) Record the reasons for each conclusion (e.g. sex identity based on skull and femoral head);

- (iii) Photograph all evidence supporting these conclusions;
- (h) Individual identification:
 - (i) Search for evidence of handedness, pathological change, trauma and developmental anomalies;
 - (ii) Record the reasons for each conclusion;
 - (iii) Photograph all evidence supporting these conclusions;
- (i) Attempt to distinguish injuries resulting from therapeutic measures from those unrelated to medical treatment. Photograph all injuries:
 - (i) Examine the hyoid bone for cracks or breaks;
 - (ii) Examine the thyroid cartilage for damage;
 - (iii) Each bone should be examined for evidence of contact with metal. The superior or inferior edges of the ribs require particular scrutiny. A dissecting microscope is useful;
- (j) If the remains are to be reburied before obtaining an identification, retain the following samples for further analysis:
 - (i) A mid-shaft cross-section from either femur, 2 cm or more in height;
 - (ii) A mid-shaft cross-section from either fibula, 2 cm or more in height;
 - (iii) A 4-cm section from the sternal end of a rib (sixth, if possible);
 - (iv) A tooth (preferably a mandibular incisor) that was vital at the time of death;
 - (v) Sever molar teeth for possible later deoxyribonucleic acid fingerprinting for identification;
 - (vi) A cast of the skull for possible facial reconstruction;
 - (vii) Record what samples have been saved, and label all samples with the identification number, date and name of the person who removed the sample.

3. Final report

The following steps should be taken in the preparation of a final report:

- (a) Prepare a full report of all procedures and results;
- (b) Include a short summary of the conclusions;
- (c) Sign and date the report.

4. Repository for evidence

In cases where the body cannot be identified, the exhumed remains or other evidence should be preserved for a reasonable time. A repository should be established to hold the bodies for 5-10 years in case they can be identified at a later time.

Notes

1/ Advisory Services and Technical Assistance in the Field of Human Rights, Human Rights Fact Sheet No. 3 (Geneva, United Nations Centre for Human Rights, 1988); Summary of Arbitrary Executions, Human Rights Fact Sheet No. 11 (Geneva, United Nations Centre for Human Rights, 1990); see, also, The Teaching of Human Rights: Proceedings of the International Congress on the Teaching of Human Rights, Vienna, 12-16 September 1978 (Paris, United Nations Organization for Education, Science and Culture, 1980).

2/ Methods of Combating Torture, Human Rights Fact Sheet No. 4 (Geneva, United Nations Centre for Human Rights, 1987), pp. 7-9 and 10-12. See also Laurence Boisson de Chazoumes and others, Practical Guide to the International Procedures Relative to Complaint and Appeals Against Acts of Torture, Disappearances and Other Inhuman or Degrading Treatment (Geneva, World Organization Against Torture, 1988).

3/ See D. O'Donnell, Proteccion internacional de los derechos humanos, 2. ed. (Lima, Comisión Andina de Juristas, 1989); and N. S. Rodley, The Treatment of Prisoners under International Law (Oxford, Clarendon Press, 1987), pp. 144-164 and B. G. Ramcharan, "The Concept and Dimensions of the Right to Life", The Right to Life in International Law (Dordrecht, Martinus Nijhoff Publishers, 1985), pp. 1-32.

4/ Report of the Human Rights Committee (Official Records of the General Assembly, Thirty-seventh session, Supplement No. 40) (A/37/40), annex X. See also M. Novak, UNO-Pakt über bürgerliche und politische Rechte und Fakultativprotokoll: CCPR-Kommentar (Kehl am Rhein, N.P. Engel Verlag, 1989), pp. 111-132; and F. Newman and D. Weissbrodt, International Human Rights: Law, Policy, and Process (Cincinnati, Ohio, Anderson, 1990).

5/ Report of the Human Rights Committee (Official Records of the General Assembly, Fortieth session, Supplement No. 40) (A/40/40), annex X. See, also, Enforced or Voluntary Disappearances, Human Rights Fact Sheet No. 6 (Geneva, United Nations Centre for Human Rights, 1988).

6/ Statement submitted by the International Commission of Jurists, a non-governmental organization in consultative status with the Economic and Social Council, category II, and the International Human Rights Internship Program, a non-governmental organization in consultative status with the Economic and Social Council, roster (E/AC.57/1988/NGO.4).

7/ Sixth United Nations Congress on the Prevention of Crime and the Treatment of Offenders, Caracas, Venezuela, 25 August-5 September 1980: Report prepared by the Secretariat (United Nations publication, Sales No. E.81.IV.4), chap. I, sect. A.

8/ Seventh United Nations Congress on the Prevention of Crime and the Treatment of Offenders, Milan, 26 August-6 September 1985: Report prepared by the Secretariat (United Nations publication, Sales No. E.86.IV.1), chap. I, sect. E.

9/ International Labour Office, Governing Body, Two Hundred and Eighteenth Report of the Committee on Freedom of Association (GB.221/6/16), para. 390(c).

10/ Annual report of the Inter-American Commission on Human Rights 1981-1982, OAS doc. OEA/Ser.L/V/II.57, doc. 6, rev.1 (Washington, D.C., 1982), p. 36.

11/ For a general overview of the question see E. R. Zafaroni, "The right to life and Latin American penal systems", The Annals of the American Academy of Political and Social Science, Marvin E. Wolfgang, ed., vol. 506, November 1989, pp. 57-67.

12/ See, Inter-American Court H.R., Velasquez Rodriguez Case, Judgment of July 29, 1988, series C, No. 4: Inter-American Court H.R., Godinez Cruz Case, Judgment of January 20, 1989, series C, No. 5.

13/ Cyprus v. Turkey, Apps. No. 6780/74 and 6950/75, Decision of 17 July 1976, European Human Rights Reports, 482 (1982).

14/ J. L. Thomsen and others, "Amnesty International and the forensic sciences", American Journal for Medical Pathology, vol. 5, No. 4 (December 1984), pp. 305-311.

Appendix II

Argentine Forensic Anthropology Team Interview, Antemortem, and Burial Site Report Forms

Reproduced from *Forensic Anthropology Training Manual*, by Karen Ramey Burns. Copyright 1999 Prentice-Hall, Inc.

INTERVIEW QUESTIONNAIRE FOR FAMILIES OF THE MISSING—PAGE 1

Provide all information possible. Fill in the blank or check the correct box where applicable.

INFORMATION ABOUT THE DISAPPEARANCE

Fill in the blanks with the appropriate information.

1. How long has this person been missing? _____
2. Did you see the body? _____
3. Did someone else report the death to you? _____

INFORMATION ABOUT CIRCUMSTANCES OF DEATH

Witness should answer Yes or No and describe the type of weapon and location of wounds.

Type of Injury	Yes	No	Type of Weapon	Location of Wounds
4. Gunshot			(e.g., handgun, AK47)	
5. Garrote			(e.g., rope, wire)	
6. Stabbing			(e.g., shiketto, machete)	
7. Beating			(e.g., baton, fists)	
8. Other				

CLOTHING WHEN LAST SEEN

When colors are part of the description, the interviewer should use a color chart. Let the witness point to the correct color, and then record the color number.

Description and Color

9. Shirt or blouse _____
10. Pants or skirt _____
11. Type of shoes _____
12. Jewelry or ornaments _____

BASIC PHYSICAL DESCRIPTION

Fill in the blanks with the appropriate description.

13. Age (If age is unknown, list as elderly, adult, adolescent, child, or infant.) _____
14. Sex (male or female) _____
15. If female, did she bear children? (yes, no, or unknown) _____
16. Race/Color/Ethnicity _____
17. Possible mixed race? (yes, no, or unknown) _____
18. Height (If height is unknown, interviewer should ask for a comparison with a living person and record the results accordingly—e.g., If the missing person is said to be "just a little taller" than his 170 cm. cousin, list height as "slightly greater than 170 cm.") _____
19. Musculature (strong, average, or frail) _____
20. Habitual posture (erect, hunched, or favoring one side) _____

INTERVIEW QUESTIONNAIRE FOR FAMILIES OF THE MISSING—PAGE 2

DENTAL DESCRIPTION

Interviewer should use a dental chart or dental casts and let the witness point to the correct tooth.

21. Were any teeth missing or extracted? (yes, no, or unknown) _____
22. If teeth were missing, which ones? (Interviewer should use a dental chart and list the tooth numbers.) _____
23. Were the teeth stained? (yes, no, or unknown) _____
24. Did the person smoke or chew tobacco? (yes, no, or unknown) _____
25. Did a dentist repair any teeth? (yes + which ones, no, or unknown) _____
26. Did the person wear dentures? (yes, no, or unknown) _____
27. Did the person complain of dental pain? (yes, no, or unknown) _____
28. Did the person have bad breath? (yes, no, or unknown) _____

DESCRIPTION OF ANTEMORTEM TRAUMA

Interviewer should use an anatomical chart so that the witness can point at the body rather than trying to recall right or left. Record the information directly on the chart.

29. Did the person break any bones during life? (yes + at what age, no, or unknown) _____
30. If so, did he or she receive medical care? (yes + at what age, no, or unknown) _____
31. Did the person walk with a limp? (yes or no) _____
32. Can anyone remember a fall, an accident, or any unusual event? (yes + nature of accident and at what age, no, or unknown) _____
33. If there was an injury, what was the medical treatment? (e.g., radiograph, sling, orthopaedic brace, plaster cast, surgical pin or wire, bone graft) _____
34. Did the person complain of pain in a specific part of the body? (yes + which body part (e.g., ear, jaw, shoulder, back, elbow, wrist, fingers, knees) or no) _____

RECORDS OF VICTIM

The interviewer should collect medical records and photographs. Remember that more than one photographic view is recommended and a smiling image is preferred.

Record Type	Records Provided by (Name, Address, Phone Number)
35. Dental	_____
36. Medical	_____
37. Radiographs	_____
38. Photographs	_____

VICTIM INFORMATION (ANTEMORTEM FORM)—PAGE 1

Witness: _____ **Date:** _____

Relation to the victim: _____

Address: _____ **Telephone:** _____

City: _____ **State:** _____ **Zip Code:** _____

INFORMATION ABOUT THE VICTIM

First and last name: _____

Nickname: _____

Sex: _____

Age (at last time seen alive): _____

Date and place of birth: _____

Nationality: _____

Last resident address: _____

Single/Married: _____

Sons: _____

Profession: _____

Place of work: _____

Associations to political parties, unions, student associations, others: _____

Date and place(s) of detention/kidnapping/execution/murder: _____

His or her detention/kidnapping/execution/murder is related to other people: ____ **Yes** ____ **No**

If Yes, please record the names of the other people, explain their relation to the victim, and indicate if they were detained/kidnapped/executed/murdered together: _____

Eyewitnesses to his or her detention/kidnapping/execution/murder: _____

VICTIM INFORMATION (ANTEMORTEM FORM)—PAGE 2

PHYSICAL INFORMATION ABOUT THE VICTIM

I. General Physical Characteristics:

Physical complexion (size of clothing): _____

Thorax: **broad** _____ **regular** _____ **narrow** _____

Stature: **exact** _____ **approximate** _____ **weight** _____

Laterality (handedness): _____

Beard (color and shape): _____

Mustache (color and shape): _____

Glasses: _____ Yes _____ No

Smoker: _____ Yes _____ No

If yes, cigarettes, cigar, or pipe: _____

How much: _____

Blood group: _____

Ethnic group: _____

Identifying skin traits (e.g., tattoos, scars, birthmarks, spots, etc.): _____

Describe dimension and characteristics of identifying skin traits: _____

Hair texture (e.g., straight, curly, crisp, etc.): _____

Hair color (e.g., blonde, brown, black, red, gray, etc.): _____

Dyed hair: _____ Yes _____ No

Hair type (e.g., thick, thin, average, etc.): _____

Hair amount (e.g., abundant, average, sparse): _____

II. Skull:

Shape and characteristics of the head (e.g., dolichocephalic/brachycephalic, supraorbital arches, etc.): _____

Shape of the nose: _____ vertical _____ straight _____ eaglelike (curved)
_____ horizontal _____ narrow _____ broad

Shape of the chin: _____

VICTIM INFORMATION (ANTEMORTEM FORM)—PAGE 3

III. Antemortem Lesions:

Congenital deformations (e.g., harelip, cleft palate, extra vertebrae or ribs, spina bifida, etc.):

Fractures:

1. Type of fracture and circumstance in which the fracture occurred (e.g., accident, beating, gunshot wound, knife wound, etc.):

2. Date fracture occurred:

3. Did a doctor see it?:

4. If yes, name of the doctor and hospital/clinic and description of diagnosis and treatment:

5. Are there X-rays?:

6. Was the fracture plastered?:

7. Consequences of the fracture:

8. If the victim did not receive any medical attention or the witness does not remember the diagnosis, please indicate the location of the fracture and treatment as precisely as possible:

Professional or acquired deformations:

1. Type (e.g., pain in the lumbar area, lumbalgia, disk hernia, deformation in hand and/or foot, etc.):

2. Did the victim go to a doctor?:

3. If yes, name of the doctor and hospital/clinic and description of diagnosis and treatment:

4. Are there X-rays?:

5. If the victim did not receive any medical attention, please indicate the location of the problem as precisely as possible:

Lesions in joints (e.g., twists, dislocations, etc.)

1. Type of lesion and circumstance in which the lesion occurred:

2. Date lesion occurred:

3. Did a doctor see it?:

4. If yes, name of the doctor and hospital/clinic and description of diagnosis and treatment:

5. Are there X-rays?:

6. If the victim did not receive any medical attention or the witness does not remember the diagnosis, please indicate the location of the lesion and treatment as precisely as possible:

VICTIM INFORMATION (ANTEMORTEM FORM)—PAGE 4

Serious diseases and/or diseases with consequences to the bones (e.g., poliomyelitis, tuberculosis, osteoporosis, malnutrition, starvation, rickets, arthritis, pneumonia, peritonitis, osteomyelitis, mastoiditis, sinusitis, etc.):

1. Type of **disease**: _____

2. Date symptoms first **appeared**: _____

3. Did the victim see a doctor?: _____

4. If yes, name of the doctor and hospital/clinic and description of diagnosis and treatment: _____

5. Are there X-rays?: _____

6. If the victim did not receive any medical attention or the witness does not remember the diagnosis, please indicate the nature and location of the problem as precisely as **possible**: _____

External elements of the body (e.g., pace maker, plastic or metal prosthesis, nonorganic heart valve, orthopedic prosthesis, intrauterine device, etc.): _____

If the victim is a woman, indicate number of pregnancies and **births**: _____

Indicate name of doctor/hospital/clinic that may provide physical information about the victim: _____

IV. Dentition:

1. Complete dentition? ____ Yes ____ No ____ Don't Know

If the victim had lost dental pieces, indicate which ones. If the witness does not remember the exact location and name of the missing teeth/tooth, indicate upper or lower maxilla, right or left side, anterior or posterior area: _____

2. Erupted third molars? ____ Yes ____ No ____ Don't Know

Indicate the situation of each of the four third molars: _____

VICTIM INFORMATION (ANTEMORTEM FORM)—PAGE 5

3. Fractured dental pieces: ____ Yes ____ No ____ Don't Know

Follow the guide from point 1:

4. Description of size and shape of the central and lateral upper and lower incisors: _____

5. Size of the teeth: ____ small ____ average ____ big

6. Color of the teeth (indicate if the victim had stains in his or her dentition; stains can be the result of smoking, of certain pharmaceuticals—e.g., Tetracycline during the calcification of the enamel, potable water with excess of fluoride, etc.): _____

7. Bruxism (grinding/clenching of the teeth while sleeping): ____ Yes ____ No ____ Don't Know

8. Congenital abnormalities:

a. Number:

missing teeth; indicate location: _____

Extra numerary teeth; indicate location: _____

b. Shape and volume:

Macrodonia (big); indicate location: _____

Microdonia (dwarf); indicate location: _____

c. Position:

Rotation (e.g., distal, mesial, facial, lingual, etc.); indicate the tooth: _____

d. Interincisal Diastema: ____ Yes ____ No

9. Indicate name of dentist/hospital/clinic that may provide the victim's dental information: _____

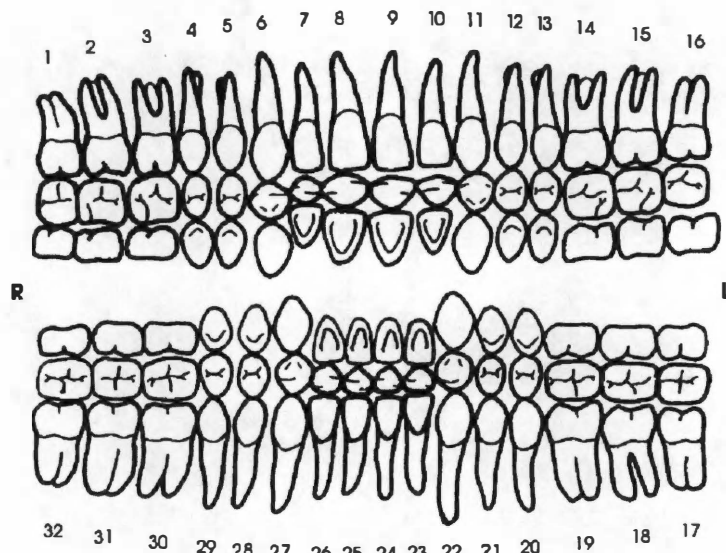
10. Dental chart: See separated page with chart.

11. Genealogical tree: _____

VICTIM INFORMATION (ANTEMORTEM FORM)—PAGE 6

I.D./Case Number: _____ I.D. Name: _____

Address: _____ Recorder: _____ Date: _____



Codification

AX = absent antemortem
 PX = absent postmortem
 IX = absent perimortem
 F = filling
 B = bridge
 MJ = metal jacket
 GJ = golden jacket
 PJ = porcelain jacket
 AJ = acrylic jacket
 RC = root canal
 AB = abscess

PP = partial prothesis
 CP = complete prothesis
 C = caries
 H = hypoplasia
 P = periodontitis
 D = diastema
 S = supernumerary
 Mi = microdontia
 Ma = macrodontia
 r = rotation

BURIAL SITE INFORMATION—PAGE 1

1. Name the city/village and state in which the burial site is located:

2. Location of the burial site (e.g., at the local cemetery; at the sugar cane factory, mine, or well; on a barren land; close to a military base or detention center, etc.):

3. Do we have the exact or approximated location of the burial site? Please describe the location as precisely as possible and draw a map or sketch of the burial site:

4. Do we have an eyewitness or eyewitnesses of the burial of the bodies? If yes, describe in detail how the burial was done: Who brought the bodies? How was the grave dug? Did the eyewitnesses participate in the burial? Are the eyewitnesses related to the victim? If yes, in what way (relatives, neighbors, friends, members of the same political party or union or church, etc.)?:

BURIAL SITE INFORMATION—PAGE 2

5. Were the victims killed at the burial site, or close to the burial site, or in a different place (their bodies later dumped into the grave)?:

6. Type of grave—individual or multiple/mass grave (more than one body):

7. Dimensions of the burial site (approx.):

8. Depth of the grave (approx.):

9. Features of the terrain (e.g., dry; wet; covered with water; covered with grass, bushes, trees, etc.). Does the rainy season affect the terrain?:

10. Information about the victim(s):

a. Number of victims (specify whether exact or approximated number):

b. List of names of the victims (specify whether or not you are sure of the names; if you don't know the names, do you know if they belonged to a particular political, social, or religious organization?):

(Use another page if necessary.)

BURIAL SITE INFORMATION—PAGE 3

c. Are the relatives of the victims available? Please indicate the names of the relatives of the victims who can be contacted to obtain antemortem information:

(Use another page if necessary.)

11. ~~Alleged~~ cause of death:

12. ~~Reason~~ why this burial site was selected to be exhumed:

Appendix III

Postmortem Report Forms

Reproduced from *Data Collection Procedures for Forensic Skeletal Material*
by Peer M. Moore-Jansen, et al 1994.

Forensic Case Information

COLLECTION ID/CASE #: _____ I.D. NAME: _____

CURATOR/ADDRESS: _____ MEANS OF I.D.: _____

RECORDER: _____ DATE: _____ POSITIVE IDENTIFICATION? _____ DATE: _____

GENERAL INFORMATION (Pages 3-8)

Source

Source

1. SEX: _____	7. DATE OF BIRTH: _____
2. RACE: _____	8. PLACE OF BIRTH: _____
3. AGE: _____	9. OCCUPATION: _____
4. STATURE: _____	10. BLOOD TYPES: _____
5. WEIGHT: _____	11. BIRTHS: _____
6. HANDEDNESS: _____	12. PREGNANCIES: _____

13. DATE REPORTED MISSING: _____	18. DEPOSIT/EXPOSURE: _____
14. DATE OF DISCOVERY: _____	_____
15. DATE OF DEATH: _____	_____
16. TIME SINCE DEATH: _____	19. DEPTH IN CM (if buried): _____
17. MANNER OF DEATH: _____	20. EST. PERIOD OF DECAY: _____

21. NATURE OF REMAINS: _____

22. PLACE OF DISCOVERY (Area): _____

23. STATE: _____ 24. COUNTY: _____ 25. MUNICIPALITY: _____

26. MEDICAL HISTORY: _____

27. CONGENITAL MALFORMATIONS: _____

28. DENTAL RECORDS (specify): _____

29. BONE LESIONS (Antemortem): _____

30. PERIMORTEM INJURIES: _____

31. ADDITIONAL COMMENTS: _____

Forensic Inventory

COLLECTION ID/CASE #: _____ CURATOR/ADDRESS: _____

SKELETAL INVENTORY (Page 7)

32. INVENTORY: Codes: 1 - present complete 4 - antemortem loss
2 - present fragmentary 5 - unerupted (dentition)
3 - absent (postmortem) 6 - congenitally missing

Cranium: _____

Frontal:	Left: _____	Right: _____	Maxilla:	Left: _____	Right: _____
Parietal:	_____	_____	Nasal:	_____	_____
Occipital:	_____	_____	Ethmoid:	_____	_____
Temporal:	_____	_____	Lacrimal:	_____	_____
Zygomatic:	_____	_____	Vomer:	_____	_____
Palate:	_____	_____	Sphenoid:	_____	_____

Mandible: _____

Body:	Left: _____	Right: _____	Ramus:	Left: _____	Right: _____
-------	-------------	--------------	--------	-------------	--------------

Dentition: _____

Max. I1:	Left: _____	Right: _____	Mand. I1:	Left: _____	Right: _____
Max. I2:	_____	_____	Mand. I2:	_____	_____
Max. C:	_____	_____	Mand. C:	_____	_____
Max. P1:	_____	_____	Mand. P1:	_____	_____
Max. P2:	_____	_____	Mand. P2:	_____	_____
Max. M1:	_____	_____	Mand. M1:	_____	_____
Max. M2:	_____	_____	Mand. M2:	_____	_____
Max. M3:	_____	_____	Mand. M3:	_____	_____

Postcranium: _____

Hyoid:	Left: _____	Right: _____	Thoracic 1-12:	Left: _____	Right: _____
Clavicle:	_____	_____	Lumbar 1-5:	_____	_____
Scapula:	_____	_____	Sacrum:	_____	_____
Humerus:	_____	_____	Ilium:	_____	_____
Radius:	_____	_____	Pubis:	_____	_____
Ulna:	_____	_____	Ischium:	_____	_____
Hand:	_____	_____	Femur:	_____	_____
Manubrium:	_____	_____	Patella:	_____	_____
Sternal Body:	_____	_____	Tibia:	_____	_____
Ribs:	_____	_____	Fibula:	_____	_____
Atlas:	_____	_____	Calcaneus:	_____	_____
Axis:	_____	_____	Talus:	_____	_____
Cervical 3-7:	_____	_____	Foot:	_____	_____

RESEARCH MATERIALS

33. SKELETAL MATERIALS: _____
 34. DENTAL CASTS: _____
 35. HISTOLOGICAL SECTIONS: _____
 36. RADIOGRAPHS/PHOTOS: _____
 37. OTHER (hair, etc.): _____

Forensic Morphological Observations

COLLECTION ID/CASE #: _____ I.D. NAME: _____
 CURATOR/ADDRESS: _____ RECORDER: _____ DATE: _____

EPiphyseal Closure (Pages 8-9)

Codes: 1 - No Union 2 - Partial Union 3 - Complete Union

38. BASILAR SUTURE: _____	47. LUMB. VERT. RIM: _____	56. PROX. RADIUS: _____
39. MEDIAL CLAVICLE: _____	48. SACRUM (1/2): _____	57. DISTAL RADIUS: _____
40. ATLAS-ANTERIOR: _____	49. SACRUM (S2/3): _____	58. PROX. ULNA: _____
41. ATLAS-POSTERIOR: _____	50. SACRUM (3/4): _____	59. DISTAL ULNA: _____
42. AXIS-ANTERIOR: _____	51. INNOM. PRIM. ELEM. _____	60. FEMUR HEAD: _____
43. AXIS-POSTERIOR: _____	52. ISCH. TUBEROSITY: _____	61. GR. TROCH. _____
44. CERV. VERT. RIM: _____	53. ILIAC CREST (ANT 1/3): _____	62. DIST. FEMUR: _____
45. THOR. VERT. RIM: _____	54. PROX. HUMERUS: _____	63. PROX. TIBIA: _____
46. L5 BODY-ARCH: _____	55. MED. EPIC. HUM.: _____	64. DISTAL TIBIA: _____

CRANIAL SUTURE CLOSURE (Pages 10-12)

Ectocranial			Endocranial		
0: open	1: up to 50%	2: >50%	3: obliterated	1: open	2: partial
			3: obliterated		

L R		L R			
65. MIDLAMBDROID: _____	_____	70. MIDCORONAL: _____	_____	75. SAGITTAL: _____	_____
66. LAMBDA: _____	_____	71. PTERION: _____	_____	76. LAMBDROID(L): _____	_____
67. OBLION: _____	_____	72. SPHENOFONTAL: _____	_____	77. LAMBDROID(R): _____	_____
68. ANTERIOR SAGITTAL: _____	_____	73. INF. SPHENOTEMP: _____	_____	78. CORONAL(L): _____	_____
69. BREGMA: _____	_____	74. SUP. SPHENOTEMP: _____	_____	79. CORONAL(R): _____	_____

RIB END CHANGES (Pages 13-22)

	Left	Right
80. RIB NO.: _____	Phase: _____	Phase: _____

PELVIC CHANGES (Pages 23-45)

	Left	Right
81. TODD (1920)/(1921):	_____	_____
82. SUCHEY-BROOKS (Suchey and Katz 1986):	_____	_____
83. McKERN AND STEWART (1957): I: _____ II: _____ III: _____	I: _____ II: _____ III: _____	I: _____ II: _____ III: _____
84. GILBERT AND McKERN (1973): I: _____ II: _____ III: _____	I: _____ II: _____ III: _____	I: _____ II: _____ III: _____
85. AURICULAR SURFACE:	_____	_____
86. DORSAL PUBIC PITTING:	1. ABSENT: _____ 2. TRACE-SMALL: _____ 3. MODERATE-LARGE: _____	1. ABSENT: _____ 2. TRACE-SMALL: _____ 3. MODERATE-LARGE: _____

Forensic Measurements

COLLECTION ID/CASE #: _____ RECORDER: _____ DATE: _____

CRANIAL MEASUREMENTS (Pages 52-60)

		Left	Right
1. MAXIMUM LENGTH (g-op):	_____	_____	_____
2. MAXIMUM BREADTH (eu-eu):	_____	_____	_____
3. BIZYGOMATIC BREADTH (zy-zy):	_____	_____	_____
4. BASION-BREGMA (ba-bl):	_____	_____	_____
5. CRANIAL BASE LENGTH (ba-n):	_____	_____	_____
6. BASION-PROSTHION L. (ba-pl):	_____	_____	_____
7. MAX.-ALVEOLAR BR. (ecm-ecm):	_____	_____	_____
8. MAX.-ALVEOLAR L. (pr-avl):	_____	_____	_____
9. BIAURICULAR BREADTH (ALB):	_____	_____	_____
10. UPPER FACIAL HGT. (n-pr):	_____	_____	_____
11. MIN. FRONTAL BR. (ft-ft):	_____	_____	_____
12. UPPER FACIAL BR. (fmt-fmt):	_____	_____	_____
13. NASAL HEIGHT (n-n):	_____	_____	_____
14. NASAL BREADTH (al-al):	_____	_____	_____
15. ORBITAL BREADTH (d-ec):	_____	_____	_____
16. ORBITAL HEIGHT (OBH):	_____	_____	_____
17. BIORBITAL BR. (ec-ec):	_____	_____	_____
18. INTERORBITAL BR. (d-d):	_____	_____	_____
19. FRONTAL CHORD (n-b):	_____	_____	_____
20. PARIETAL CHORD (b-l):	_____	_____	_____
21. OCCIPITAL CHORD (l-o):	_____	_____	_____
22. FORAMEN MAGNUM L. (ba-o):	_____	_____	_____
23. FORAMEN MAGNUM BR (FOB):	_____	_____	_____
24. MASTOID LENGTH (MDH):	_____	_____	_____

MANDIBULAR MEASUREMENTS (Pages 61-63)

	Left	Right	Left	Right
25. CHIN HEIGHT (gn-id):	_____	_____	_____	_____
26. BODY HEIGHT at MENTAL FOR:	_____	_____	_____	_____
27. BODY THICKNESS at M. FOR:	_____	_____	_____	_____
28. BIGONIAL DIAMETER (go-go):	_____	_____	_____	_____
29. BICONDYLAR BR. (cdl-cdl):	_____	_____	_____	_____
30. MIN. RAMUS BREADTH:	_____	_____	_____	_____
31. MAX. RAMUS BREADTH:	_____	_____	_____	_____
32. MAX. RAMUS HEIGHT:°	_____	_____	_____	_____
33. MAND. LENGTH:°	_____	_____	_____	_____
34. MAND. ANGLE:°	_____	_____	_____	_____

° Record only if mandible is used.

POSTCRANIAL MEASUREMENTS (Pages 64-76)

CLAVICLE: Epiph. P/A:	Left	Right	INNOMINATE: Epiph. P/A:	Left	Right
35. MAXIMUM LENGTH:	_____	_____	56. HEIGHT:	_____	_____
36. SAGITTAL DIAM. at MIDSH:	_____	_____	57. ILIAC BREADTH:	_____	_____
37. VERTICAL DIAM. at MIDSH:	_____	_____	58. PUBIS LENGTH:	_____	_____
			59. ISCHIUUM LENGTH:	_____	_____
SCAPULA: Epiph. P/A:	Left	Right	FEMUR: Epiph. P/A:	Left	Right
38. HEIGHT:	_____	_____	60. MAXIMUM LENGTH:	_____	_____
39. BREADTH:	_____	_____	61. BICONDYLAR LENGTH:	_____	_____
HUMERUS: Epiph. P/A:	Left	Right	62. EPICONDYLAR BREADTH:	_____	_____
40. MAXIMUM LENGTH:	_____	_____	63. MAX. DIAM. of HEAD:	_____	_____
41. EPICONDYLAR BREADTH:	_____	_____	64. A-P SUBTROCH. DIAMETER:	_____	_____
42. MAX. VERT. DIAM. of HEAD:	_____	_____	65. TRANSV. SUBTROCH. DIAM:	_____	_____
43. MAX. DIAM. at MIDSHAFT:	_____	_____	66. A-P DIAM. MIDSH:	_____	_____
44. MIN. DIAM. at MIDSHAFT:	_____	_____	67. TRANSV. DIAM. MIDSH:	_____	_____
			68. CIRCUMFERENCE AT MIDSH:	_____	_____
RADIUS: Epiph. P/A:	Left	Right	TIBIA: Epiph. P/A:	Left	Right
45. MAXIMUM LENGTH:	_____	_____	69. CONDYLO-MALLEOLAR LEN:	_____	_____
46. SAGITTAL DIAM. at MIDSH:	_____	_____	70. MAX. PROX. EPIPH. BR:	_____	_____
47. TRANSV. DIAM. at MIDSH:	_____	_____	71. MAX. DIST. EPIPH. BR:	_____	_____
ULNA: Epiph. P/A:	Left	Right	72. MAX. DIAM. NUTRIENT FOR:	_____	_____
48. MAXIMUM LENGTH:	_____	_____	73. TRANSV. DIAM. NUTR. FOR:	_____	_____
49. DORSO-VOLAR DIAMETER:	_____	_____	74. CIRCUM: AT NUTR. FOR:	_____	_____
50. TRANSVERSE DIAMETER:	_____	_____			
51. PHYSIOLOGICAL LENGTH:	_____	_____	FIBULA: Epiph. P/A:	Left	Right
52. MIN. CIRCUMFERENCE:	_____	_____	75. MAXIMUM LENGTH:	_____	_____
			76. MAX. DIAM. at MIDSHAFT:	_____	_____
SACRUM: No. Segments:	_____		CALCANEUS: Epiph. P/A:	Left	Right
53. ANTERIOR HEIGHT:	_____		77. MAXIMUM LENGTH:	_____	_____
54. ANTERIOR SURFACE BREADTH:	_____		78. MIDDLE BREADTH:	_____	_____
55. MAX. BREADTH (S-1)	_____				

Vita

Sarah Hughes was born in Marietta, Georgia on May 12, 1975. She attended schools in the public system of Marietta, Georgia, the Cobb County Public School System, where she graduated from Sprayberry High School in June, 1993. She entered the University of Georgia, Athens, Georgia in August of 1993 and graduated cum laude with a Bachelor of Arts in Anthropology in June of 1997. After taking two years off to volunteer for a human rights forensic team in Guatemala and to work at a residential high school in Mobile, Alabama, she entered the Master's program in Forensic Anthropology at the University of Tennessee, Knoxville in September of 1999. She was awarded a graduate teaching assistantship in the fall of 2000 and taught three sections of Introduction to Physical Anthropology. Sarah completed her thesis in May, 2001 and her master's degree was conferred the following August.