Forensic anthropology in crisis settings: a required component of investigation in the world’s trouble spots

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Abstract

This article presents an account of the involvement of forensic anthropology in the investigation of human rights abuses in the modern era, and the difficulties it faces with respect to lack of adequate funding, volatile settings, the presence of unexploded ordnance, corruption in governmental agencies and a lack of good will, absence of support for NGOs and the curtailment of formal judicial proceedings to effect transitional justice. Syria, Iraq, Afghanistan, Spain, Mexico and the ‘Northern Triangle’ are provided as regional examples of the problems encountered when attempting to conduct forensic anthropological investigations to locate mass graves, retrieve victims and obtain proper identifications. Interventions by various organisations are highlighted to illustrate their assistance to forensic and non-forensic individuals through technical support, training and mentoring in the areas of crime-scene management and identification techniques. Interventions in mass-grave processing when state agencies have failed, the importance of DNA banks and information from family members and witnesses are also presented.

Key words: forensic anthropology, disappeared, missing, mass graves, identification, training

Forensic anthropology has constituted an important aid in the investigation of violations of human rights and has contributed toward subsequent judicial proceedings which have resulted in the criminal convictions of individuals accused of atrocities related to genocides, crimes against humanity and war crimes. Although the discipline is now practised on a global scale, its inception has actually been rather recent. The formal application of forensic anthropology in the investigation of human rights violations took place during the 1980s, an era when the discipline was attaining prominence as an element of judicial investigation amongst police forces in the United States.

Following the initiative of the late forensic anthropologist Dr Clyde Snow (1928–2014), forensic anthropology was founded during the search, retrieval and identification of those who had perished at the hands of the Argentinean military.
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...junta during that country’s Dirty War (1976–83). Forensic interventions took place shortly after democracy was re-established in Argentina, when forensic personnel from the United States became involved in order not to solely return the disappeared to their waiting families, but also to convey transitional justice to Argentinean society. During the 1980s and 1990s the discipline gained momentum with the creation of independent national forensic anthropological teams in Latin America: the Argentinean Forensic Anthropology Team (EAAF), the Peruvian Forensic Anthropology Team (EPAF) and the Guatemalan Forensic Anthropology Foundation (FAFG). These non-profit organisations were initially established to investigate violations that had occurred within their own national boundaries, thereby addressing unique needs following years of extra-judicial killings and thousands of disappearances. In due course, the newly proficient teams applied their expertise to investigations in other parts of the world, including wider areas of Latin America, where gross violations of human rights had taken place through wars, civil wars, foreign invasions, dictatorships, corruption and genocide, with many of the latter elements being frequently interrelated. Many of their interventions led to much-needed truth commissions, whereby unlawful activities were examined and, as a result, many trials ensued.

Additionally, the Boston-based NGO Physicians for Human Rights (PHR) was also formed; during the mid-1990s PHR started to include forensic anthropologists among the forensic personnel recruited for various missions, including those which took place in the Balkans and Rwanda. Further, workshops were hosted by PHR, as in the case of El Salvador, to train local forensic medical doctors in the areas of search and recovery. Due to the frequently intense nature of the work, forensic anthropologists participating in human rights investigations have faced moments of openly hostile aggression and found themselves in conditions of extreme danger in the zones where their assistance was required. Such situations frequently occur where residual conflict of some kind is still present. They include verbal abuse, as happens in Spain when particular civilians do not want the crimes committed by the Franco regime be openly investigated. In South America attacks against government forensic teams (not solely towards the forensic anthropologists) by guerrilla or paramilitary groups are known, at which times intervention by the military has been necessary. In Africa, unexploded ordnance may remain even after a sweep search has been made prior to the intervention (author’s personal experience; privileged information obtained).

As a newcomer within the forensic sciences, forensic anthropology made ground-breaking interventions for all involved and brought much-needed support to the grieving families and survivors of violent events. In perspective, however, within the time frame of the twentieth century, investigations utilising forensic anthropology have covered a proportionally minute number of incidents when compared to the overall magnitude of gross violations and unlawful acts which have occurred against unarmed civilians and military personnel alike. Extreme violence and elevated death tolls have taken place in both national and...
international conflicts. In terms of abuses taking place inside national boundaries, one can cite the case of Stalin’s purges from 1936 to 1937, with a toll of approximately 13 million victims, and the Rwandan civil war and genocide of 1994, at which time in the region of 800,000 people died.\textsuperscript{10} On the international arena, armed conflicts have encompassed extensive geographical regions, revolving mainly around political interests. In the latter case, reference can be made to the First World War (1914–18), with 17 million dead including civilian and military alike\textsuperscript{11} and the Second World War II (1939–45), with a figure of 72 million civilian and military casualties,\textsuperscript{12} while China’s presence in Tibet from 1950 to 1990 claimed 1.2 million lives\textsuperscript{13} and the Soviet Union’s invasion of Afghanistan between 1979 and 1988 created 1.3 million victims,\textsuperscript{14} to name just a few. Certain conflicts have spilled over into the twenty-first century, as in the case of the Colombian civil war which commenced in 1966, a low-intensity war which has taken in the region of 200,000 casualties in the process.\textsuperscript{15}

All of the conflicts mentioned above have been investigated through forensic archaeology and anthropology interventions, with exception of China–Tibet.\textsuperscript{16} Due to the typically extreme volume of casualties it is impossible to account for every victim, yet such investigations have shed light on the events which transpired; in the case of Rwanda, statistical data based on the investigation of one site was later used at the International Criminal Tribunal for Rwanda (ICTR) by the prosecution.\textsuperscript{17} In the context of Colombia, forensic investigation into the disappeared remains on-going at present; many challenges arose during the latter scenario, owing to various circumstances including families and communities being hesitant to report upon any disappearances, due to fears of reprisal, with burials occurring as NN (No Name) in cemeteries without outside knowledge. In order to mitigate the situation and initiate an open process of information, the country liaises with the National Registry of the Disappeared, which further collates and links inter-institutional information; as a result, a map has been compiled and made accessible which indicates the number of known disappeared per region.\textsuperscript{18}

This elevated number of casualties distinguished the twentieth century as the most violent in contemporary history.\textsuperscript{19} Nonetheless, the first two decades of the new millennium have witnessed constant violations of human rights, not just globally but on a daily basis, and frequently conducted by state forces which appear to go about their business with impunity. The latter have little or no accountability within the international community, let alone to locally organised bodies, however they may be manifested. The circumstances by which massive levels of human suffering continue to occur today on a constant basis are countless, with violations occurring within many different levels of power.

**The new millennium**

Seventeen years into the new millennium, the brutality towards vulnerable groups continues unabated; high death tolls persist, the sheer number of the disappeared and missing\textsuperscript{20} having grown to epidemic levels. In many cases, forensic personnel have found it virtually impossible to work effectively, due to volatile military
and political climates which create unsafe working conditions; additionally, there appears to be a lack of will to cooperate on the part of governmental institutions, and an absence of much-needed funds in some cases. Such circumstances translate into affected families being kept waiting in limbo and the increasing probability of transitional justice being stalled or negated.

Violent behaviour continues to be projected on a frequent basis, and at all levels of power; that is, not only by state agencies, but also via the actions of both small and large locally organised groups which desire to control their operating areas. As a result, anyone may become an unwitting and potential victim; increasing numbers of international migrants who make their journeys under difficult and dangerous conditions face the possibility of being caught in the wrong place at the wrong time, often in association with elements of narco-trafficking and organised crime. Such individuals often pay for the transgressions of relatives who traffic drugs, suffer the effects of civil conflicts, as between warring factions in the Middle East, and are victims of terrorism, foreign occupations, passive genocide, lynchings and abuses of power by police and other governmental agencies, among others.

On the positive side, human rights organisations continue to work on a constant basis to both monitor and intervene, when possible with local governmental support, in order to investigate mass graves and execution sites, to mentor local groups to carry out investigations or to preserve the sites of abuses until proper interventions can be conducted.

The following examples are expanded upon in order to highlight such circumstances as occurring on a global scale.

**The Syrian civil war (2011–present)**

The Syrian civil war started in 2011, and has since resulted in the deaths of an estimated 470,000 people, including women and children, through bombings, shootings, air strikes, torture and unlawful executions, among other factors. The figures at hand for the most part are documented; nevertheless, there remain thousands of individuals who are undocumented victims of enforced disappearances and detention on the part of government forces, or those captured by numerous warring factional groups such as ISIS, Nusra Front, Jaish al Fateh and Daesh which abound throughout the country; the vast majority of victims are either murdered or trafficked. Further, factional groups frequently control vast geographical areas, habitually denying aid to civilians who lack the basic necessities for survival, and resulting in numerous unrecorded deaths. Population displacement is a real problem, with the issue of Syrian immigrants manifesting as a global human crisis, their ultimate fates in many instances are simply impossible to verify conclusively.

On Syrian soil, there are positive reports of hundreds of mass graves; however, the exact location of all of them is unconfirmed at present. In a case presented by Amnesty International, it is claimed that prisoners have been and continue to be systematically killed by the regime and disposed of in mass graves outside
the capital city of Damascus, a report that the state refutes as being categorically untrue. However, state military personnel have reported, for instance, the finding of a mass grave at the recaptured ancient city of Palmyra which, according to their statement, contained the bodies of military personnel in addition to civilian casualties, most of whom had been identified. Other reports originating from foreign military personnel assisting the regime indicate the presence of mass inhumations of tortured and mutilated civilian casualties.

The above reports make it clear that blame and denial amongst warring groups muddles both the facts and the context surrounding them. It should be noted that militant groups openly acknowledge the execution and mass burial of civilians; in such cases the sites are known, yet it is most often the case that secure access to such sites is not possible.

The proper handling of the search for and rescue of bodies, as well as their positive identification by forensic personnel, is desperately needed; yet the issue of the disappeared will remain unresolved for the foreseeable future, due to the volatile political climate and dire situation on the ground.

In early 2017 the Human Rights Council Independent International Commission of Inquiry on the Syrian Arab Republic analysed the country’s situation via a series of reliable information sources including satellite imagery, witness testimonies, medical records, academic investigations, United Nations (UN) documents and governmental and non-governmental papers. The Council officially stated that the situation within the country had reached extremely volatile levels between the warring groups, perpetuating enforced disappearances, arbitrary detention, torture and summary executions, with serious violations of customary international humanitarian law which affected both fighters and civilians alike.

Situations such as the above example denote circumstances in which it is practically impossible for any type of meaningful forensic intervention to be attempted; within the scope of the Syrian situation there is no potential end in sight, such that that the numbers of casualties will continue to rise, with the possible search for bodies becoming progressively more complex.

It is feared that by the time these graves can be reached, sufficient damage will have occurred to make the future documentation of the events problematic at best, and the subsequent exhumation and identification of the victims infinitely more difficult to accomplish.

The Group of the Progressive Alliance of Socialists and Democrats in the European Parliament (S&D) made an appeal in 2016 for European support regarding the preservation and eventual exhumation of mass graves in Syria and Iraq. Its concern is focused on loss of the proper evidence needed for potential judicial proceedings regarding genocide, crimes against humanity and war crimes. In an attempt to mitigate this situation, initiatives to garner information regarding mass grave sites and the numbers of bodies, if known, are carried out by local and international groups whenever possible.
Iraq’s insurgencies and past conflicts

Of added alarm is the neighbouring country of Iraq; although the Iraqi war ended in 2011 following seven years of fierce conflict, five years later, various militant groups, including Islamic State, continue to fight, carrying out abductions and torture, enslaving and executing civilians, many of whose bodies are disposed of in mass graves or left to decompose openly on the surface. Reports of increasing numbers of clandestine burials in Iraq originate from news agencies and human rights organisations such as the International Commission of Missing Persons (ICMP). These indicate that families continue to search for their disappeared relatives, and, in the process, frequently disturb the context of burial before proper recording has been conducted. This is added to the scores of clandestine mass graves created during Saddam Hussein’s rule (1979–2006) and which also require proper investigation; further, additional graves exist related to the Iran–Iraq War of the 1980s.

As with Syria, there appears to be no end in sight to the violence in Iraq; yet, in 2005 ICMP was a party to the creation of the Law on the Protection of Mass Graves, and in 2012 it signed an agreement with various Iraqi ministries to address the problem of searching for those who have vanished by providing technical support, training and mentoring within standards that are compatible with the country’s criminal code and related laws, including the areas of crime-scene management, mass-grave exhumation, chain of custody and upgrading of the mortuary infrastructure. Further, family groups have received induction on the importance of data collection for the accurate cross-matching of information gathered. Collective efforts continue to secure mass graves in order to protect potential evidence for use in intended future judicial proceedings.

Additionally, ICMP and Human Rights Watch have reported concerns regarding the destruction of mass graves containing victims of ISIS genocide against the Yazidi people in northern Iraq. Here too, without proper evidence, prosecution of the perpetrators will most likely be impossible; nonetheless, the Yazda non-profit organisation based in the United States works to support the Yazidi ethnoreligious minority group, and had recorded at least thirty-five sites containing mass graves to the beginning of 2016. This was accomplished through actual visits to the sites, reports from survivors of the massacres, reports from areas still under Islamic State control and sites exhumed by the Kurdish Regional Government (KRG). Numerous additional kill sites have been reported which it is crucial to preserve and investigate, as the KRG has presented the case to the International Criminal Court. Unfortunately, formal organised local or international forensic interventions have not been accomplished to date within the total area.

There is also a need to attend to victims of the Iran–Iraq War. Here the International Committee of the Red Cross (ICRC), under a humanitarian mandate, supported Iraqi organisations in 2016 by providing the equipment needed to conduct exhumations and training for the personnel involved, in addition to professional assistance during the identification process and repatriation of the bodies to their respective countries. The situation in Iraq being relatively less volatile than that in Syria, a greater amount of forensic work has been possible.
Afghanistan's efforts to find the dead

Afghanistan is an example of a country plagued by a history of violence. For over three decades internal armed conflict, foreign invasions and occupations, in addition to the actions of local warring factions, have widely affected its citizens; as a result, it is estimated that the whereabouts of over one million people are unknown at present, including those who are missing or have fallen victim to enforced disappearances. As a result, PHR has maintained a long-term intervention in connection with the investigation of such atrocities, in addition to attempting the search for and recovery of bodies.

In 1997 PHR, in conjunction with the United Nations High Commissioner for Human Rights (OHCHR), assigned a forensic anthropologist to work with the Special Rapporteur on Human Rights for Afghanistan in connection with the unlawful killings of Taliban prisoners at the hands of Northern Alliance forces. The work consisted of making a preliminary appraisal of the existence of mass graves, the numbers of victims and the cause and manner of their deaths.39

Based on the findings, it was recommended that a proper forensic investigation should be conducted on the ground; yet this work was never carried out, most likely due to political pressures. The areas where the bodies were discovered have since been disturbed.40

However, since then, investigations in Afghanistan have continued. During 2002 PHR was alerted to areas in the north of the country where bones, spent bullets and clothing believed to have been associated with the 2001 massacre of approximately 2,000 Taliban prisoners of war (POWs) were located en masse.41 It is known that US Special Forces on the ground were close to the authorities believed to be responsible for the murders; further, witnesses indicate that these Special Forces were present when the assaults against the POWs occurred, and aided the process which brought about their deaths. While the Pentagon refused to provide any statements, PHR requested a full investigation of the matter; the UN declared that the Afghan ‘government was too fragile to investigate’.42

PHR has taken the approach of training local personnel in order to gather information and investigate the events that took place, in addition to searching for, locating and recording the findings. The initiative gained the support of international and Afghan NGOs, as well as Afghan and US governmental bodies. As a result in 2010, eighteen individuals from governmental and NGO agencies were trained at the Afghan National Police Academy in a five-week course on the theoretical aspects of evidence and crime-scene documentation, in addition to forensic anthropology focused on osteology but not on human identification, with the emphasis being on the identification and preservation of mass graves. After the classroom induction the group had the opportunity to work, properly supervised, on a mass grave discovered a year earlier within the Ministry of Interior compound.43

The students were not expected to emerge as fully qualified professionals prepared to take on the task of mass-grave exhumations and post-mortem examinations, but to carry on the work under proper mentoring by fully qualified experts when needed and until they can demonstrate the ability to work independently.
However, the group is prepared to document any future mass graves that are discovered, in an effort to secure such sites and preserve them for formal future intervention.

Because no prior research work in relation to forensic anthropology had been conducted in Afghanistan, there was a need to determine which population standards would be utilised to profile skeletal human remains, a process which is very challenging. As a result, PHR produced a suitable training manual based on international standards and incorporating methods which have been validated within the context of similar populations, and taking into account published studies from the Middle East and India. Over time, such methodologies can be refined according to what works best to achieve accurate biological profiles.

Moving forward with respect to finding the disappeared and the missing whilst providing transitional justice for the affected population rests on various issues. These include the need for appropriate higher education for those professionals involved in the areas of science, medicine and law, whilst considering cultural and religious domains. In terms of infrastructure, the country does not possess the necessary laboratories, mortuaries and courts in order to conduct the work that is required. Finally, approaching sites of interest for investigation is at times impossible, due to many being located within areas of difficult access or under the control of factional groups; the eruption of violence makes them largely inaccessible to forensic personnel.

The latest attempt to move forward was in 2016 when PHR, along with Afghanistan Forensic Science Organisation (AFSO), was able to conduct an exhumation of seven bodies in a mass grave; yet concerns remain, as AFSO indicates that mass graves continue to be destroyed.

**Mass graves in Spain**

Spain is second to Cambodia with respect to the number of mass graves in need of investigation within its borders, estimated to be over 2,000 throughout the territory. The number of the disappeared is estimated at over 114,000 individuals, victims of both the Spanish Civil War (SCW, 1936–39) and Franco’s subsequent regime (1939–75). These two periods witnessed torture, extra-judicial executions and clandestine burials on a huge scale, most of which remain uninvestigated, with the affected population unable to attain transitional justice.

The governments which followed once democracy was re-established possessed no serious intention to openly investigate what had transpired during those thirty-nine years; this stance in part was due to the Amnesty Law of 1977, whereby members of the regime and its followers were universally pardoned, with no judicial proceedings taking place; in addition, members of the new governments included individuals who had been part of Franco’s dictatorship and who would not have been interested in seeking a process of transitional justice.

This has meant that over the years since 1975 the survivors and families of victims have never received a proper opportunity to be heard, or to learn the fate of their loved ones in a formal judicial proceeding.
It was not until the year 2000 that for the first time the exhumation of a mass grave took place which applied proper forensic archaeological techniques, in addition to DNA analysis, in order to establish proper identifications. That event initiated a momentum which gave rise to the Association for the Recuperation of Historical Memory (ARHM), which was established to take on the cases of those interested in searching for their loved ones and having their bodies returned. ARHM has been able to work actively with government funding which permitted basic operations; however, the field and laboratory work has largely relied on volunteers from all walks of life, including forensic professionals. Following their lead, other NGOs have sprung up throughout the country; in addition, universities have become involved in various roles.

The sheer number of mass graves and the disappeared, compounded at times with the reality of running out of funds, has meant slow progress in accomplishing these goals. In 2014 foreign contributions permitted the work to continue, but for an indefinite period. Since then, progress has been somewhat intermittent, as and when funds are available. As of January 2017 the three permanent ARHM members who were paid monthly to keep the operations going have been laid off and there is no financial relief in sight. With no financial resources to continue its work, ARHM is facing uncertainty; further, there is no clear intention on the part of the government to provide the organisation with funding for the budget year 2017–18.

Related to the problem of proper funding, the identification process has also been affected by lack of access to DNA testing. Although it is true that in some cases the contamination and poor condition of bones can preclude this type of testing, it should be administered as a matter of course, when possible, to meet high forensic standards. Further, when families do request this type of testing, in many instances the government expects them to pay for it, a situation which is not acceptable under any terms and which openly contravenes Resolution 60/147 of the UN General Assembly of 2005. DNA analysis would be a most advantageous procedure in situations in which the biological profiles of multiple victims within a given mass grave might be similar, or when disturbance of the grave at a prior juncture has caused severe comingling. In circumstances where bone remains cannot be assigned to any one specific individual – a struggle which the ARHM has had continually to deal with – the remains are usually reburied together, with the consent of the families concerned.

To deal with the above issue, the ARHM pursues an integrated approach prior to the actual exhumation. Whenever possible, searches are made of archival records related to the deaths of those being searched for and interviews are undertaken with relatives and other individuals who knew the victims and/or are familiar with the events that brought about their demise. These steps are normally carried out by social anthropologists and historians, at times accompanied by a psychologist, all following set protocols. Further, any significant physical characteristics of the victims are detailed, where appropriate, in an effort to aid in identifications, such ante-mortem bone trauma, or particular dental work uncharacteristic of the time, such as gold fillings (author’s experience). In sum, the identification process is
carried out cumulatively by cross-matching information. It is the author’s knowledge that many families accept results stemming from this approach, and in such cases the respective bodies are returned for proper burial.

Due to the fact that many who are still actively searching for the disappeared are elderly, or witnesses may no longer be alive, in many instances their grandchildren, who may be well familiar with the background of the cases, are directly involved in the process.

Despite requests from the UN and human rights organisations over the years, the Spanish government has not taken the required steps to fulfil the needs of those seeking justice. Presently, Argentina has taken on hundreds of cases presented by Spanish families utilising universal jurisdiction, a legal option that is available when concerned governments do not conduct their own investigations. Yet the process has not run smoothly, to say the least, due to some Spanish government offices having openly blocked the investigative process in some instances.

**Migration, the missing and the disappeared in Latin America**

The global phenomenon of migration has brought with it the need to address the search for and handling of the bodies of those who have gone missing or disappeared, along with the proper management of ante-mortem and post-mortem data for future cross-referencing. This is both a pressing and an increasing issue for countries around the world. The International Organisation for Migration (IOM) has expressed concerns about the policies required to effectively address these problems, and had asked what measures need to be implemented by the authorities concerned in order to guarantee the search for and identification of those who either have died or remain unaccounted for.

In Latin America, migration comprises both internal movements and influxes from other continents. The major issues leading to the former include problematic or volatile social, economic and political circumstances. The following discussion focuses primarily on the geographical region of Mexico and the ‘Northern Triangle’, the latter a geographical zone comprising the countries of El Salvador, Honduras and Guatemala.

At present, Mexico and the Northern Triangle suffer from epidemic levels of corruption coupled with governmental indifference, a toxic combination which promotes social instability and extreme poverty, in addition to high levels of violence. In terms of violence, the living spaces of particular population sectors are permeated by organised crime at all levels, including drug trafficking, rape, enforced disappearances, extortion and murder (single or mass murder and femicide); these crimes are often interrelated and committed by brutal gangs, by drug cartels or at the hands of the local authorities.

During the first two months of 2017 El Salvador was classified as the most violent country in the world; during the same period Mexico witnessed its highest rates of murder on record and possessed the most mass graves in the region, referred to as narco-graves. It is estimated that 30,000 people have disappeared in Mexico from 2007 and 2016, predominantly connected to narco-criminality in which state
agents may also have participated. Consequently, Latin America is considered the most violent area in the world not currently at war.\textsuperscript{70}

The individuals affected include children and teenagers, many of whom travel alone, frequently placing themselves in dangerous circumstances and risking their lives in the attempt to reach areas which they believe to offer safer and better living conditions, such as in the United States. Thousands of immigrants have become exposed to treacherous terrain in tropical or desert regions as more strict border controls are put into place. The chosen routes are not necessarily those that are most suitable for such extreme treks, although they can offer concealment from the authorities during transit. Dangers includes becoming lost, exposure to extreme climatic conditions, dangerous fauna and flora, accidental death, in addition to the risks of becoming caught up in human trafficking and facing similar dangers to those encountered in their original living spaces.\textsuperscript{71} These conditions make Mexico and the Northern Triangle extremely unsafe areas to transit as a migrant; in some areas finding the dead is no easy task, and from the forensic perspective cases can be complex to investigate.

One needs to think seriously about Donald Trump’s plans to build a wall along the Mexican border in order to stem the flow of migration from the south; if it were built, would such a structure actually constitute a successful deterrent? It is important to note that the number of migrants apprehended at the US–Mexican border has reduced considerably, from over 1.6 million in 2000 to 400,000 in 2015,\textsuperscript{72} due to measures put into place over the years; yet what is of primary concern here is the high numbers who die en route.

Missing family members and friends, mass graves, bodies dumped in plain sight and governmental corruption and lack of interest are now constant elements of the region’s world-view. These societies face frustration at the lack of active involvement by the authorities in attempts to resolve such situations; or people live in fear of being openly denounced, as the association of many civil servants with organised crime makes it very difficult for the general public to safely approach state offices to voice their concerns or seek redress. Those who have taken steps to request an official investigation face a slow process, due to general lack of support, bureaucratic red tape, misunderstandings and unclear information provided on behalf of government agencies. Compounding the difficulties, the return of remains can be halted due to the lack of strict protocols and proper procedures in relation to the chain of custody, such that the evidence gathered can be openly questioned and brought into doubt, and genetic testing is not always reliable.\textsuperscript{73}

In 2012 concerned NGOs from Mexico, El Salvador and Honduras, representing various civil society groups, along with EAAF, met in Washington, DC to discuss the problem of missing migrants and human remains that have not been identified and returned to their respective families, and to create a more sustainable system connecting regional, national and foreign data. Three points were put forward to the Mexican government in order to address these concerns: firstly, a group of international forensic personnel to work along with Mexican personnel to aid in the identification process, due to complexity of many of the cases; secondly, the creation with the Mexican government of a national and regional cross-reference
system with data available on missing individuals, since the existing centres currently do not have the same procedures and policies for obtaining information and clear cross-referencing with other governments and foreign organisations. Lastly, the need was highlighted to create forensic protocols and guidelines to be followed by all concerned, aiming at creating consistency and thereby easing the process. These points were aimed at resolving the issue of not having a system in the country which was fit for purpose to search for the missing. However, almost predictably, to date the recommendations have not been properly put into effect and the system remains chaotic at best.

Today, the Colibrí Center for Human Rights, a non-profit advocacy organisation operating in Arizona, supports humanitarian and forensic work dealing with the problem of missing migrants along the US–Mexico border. The organisation collects DNA samples in the United States, along with information from concerned families and witnesses, thereby coordinating with forensic personnel at the Pima County Office of the Medical Examiner (PCOME) in the same state; here, hundreds of bodies have been recovered from along the border region, many not in possession of formal identification papers. The remains have been analysed by forensic anthropologists, but positive identifications have not been made. By gathering DNA samples, a robust DNA database is being created; yet, it must be kept in mind that unless the investigating teams possess reliable background information to go by, the stored DNA samples will not be of any help.

Other non-profit organisations are also assisting families in Mexico and Central America; one of them is the EAAF. Through the Border Project (Frontera in Spanish), biological and DNA samples are collected from families of the missing in Mexico and the Northern Triangle to create forensic databanks, along with information gathered through formal questionnaires. This work is done in coordination with state agencies and NGOs who represent the concerned families. Once completed, the data is made available to forensic personnel in the United States, including PCOME.

In relation to mass graves, ICRC has aided Mexico with regard to training forensic personnel in identification processes. ICMP has also intervened in Mexico with regard to missing persons by assessing local governmental institutions in terms of improving the forensic infrastructure to adequately handle the thousands of cases at hand. However, families continue to take matters into their own hands in the search for, and retrieval of remains.

Families have also taken their own initiative to contact the EAAF to investigate mass graves in Mexico, as was the case with forty-three students who went missing from Iguala, Guerrero. Here the findings of the EAAF did not match the findings of local authorities, indicating that the students were not recovered at the investigated site.

Although more institutions have been created as recently as 2015 to mitigate the difficulties encountered with these issues, problems continue to persist. The issues presented here permit an appreciation of the difficulties faced when taking on the task of investigating past events, providing identifications of the dead and bringing about justice in the area of human rights investigations.
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Conclusion

While human rights abuses continue to occur in all areas of the world, proper investigations into these crimes have been halted for a variety of reasons, among them being the lack of safety in volatile regions, war, lack of funding for proper investigations, NGOs with limited support and infrastructural resources, the lack of good will on behalf of government agencies, endemic corruption at the state level and an increase in the intensity of warring between factional groups.

Such conditions have been exemplified in this article by reference to the situations in Syria, Iraq, Afghanistan, Spain, Mexico and the Northern Triangle, and the difficulties that are encountered when searching for missing and disappeared victims in order to arrive at positive identifications have been highlighted.

In every case, serious forensic intervention is required, and adequate time is needed for thorough investigations, together with steadfast political commitment and support from international organisations in order to gather information into unlawful deaths; only via a meaningful and structured process will proper prosecutions be achieved and transitional justice be conveyed to the civil societies involved.

These situations are creating an impact on democratic processes in order to bring closure for those in search of the truth; however, transitional justice is not being achieved.

Organisations such as ICMP, the ICRC and PHR are intervening in areas where forensic anthropology is greatly needed. This is accomplished by delivering technical support, training and mentoring to non-forensic individuals as well as to existing forensic personnel, covering the areas of search and location of mass graves, accurate recording of data and mass-grave exhumation, in addition to chain-of-custody and identification methods. All these types of support are presented according to the laws and religious and cultural beliefs of each region. The necessary equipment is supplied in some cases, and assistance with the process of repatriation also provided.

The EAAF has become involved with the investigation of mass graves in Mexico on behalf of families who do not have confidence in the system and who seek an outside means to fulfil their needs. Additionally, via Border Project, EAAF is collecting biological and DNA samples in order to compile a forensic databank, accompanied by information on each case which is provided by family members and witnesses. This project links information at both the regional and international levels within the contexts of both the Northern Triangle and North America, a much-needed process to attain positive identifications.

Notes

1 Forensic anthropology is referred to here as a discipline that encompass skeletal biological studies (sub-discipline of biological anthropology) that are capable of analysing human remains found in various stages of decomposition in order to arrive at a biological profile, and also including the area of forensic archaeology. The latter is crucial, as the forensic anthropologist must be present at any crime
scene to note the context of the area and take note of the taphonomic effects that have acted upon the scene and remains alike, as these can affect what is observed at the mortuary during the post-mortem examination.


4 Ibid., 35–6.

5 Ibid., 34.

6 The term ‘disappeared’ is used here to refer to those who have been the victims of enforced disappearance.


16 The author does not have knowledge of any intervention conducted in China after the Tibet invasion.


20 The term ‘missing’ refers here to a person who has gone missing for a variety of reasons. In this century, the number has increased in part due to the migration phenomenon worldwide.


22 This term is used here to denote political aggression and annihilation towards a sector of a given population in a constant but not intense manner; that is, the killing of the group is conducted by way of denial of medicine, water and food, and systematic killings on a steady basis but with low numbers. Such circumstances can be seen in actions against Palestinians by the Israeli state, or towards West Papuans by the Indonesian government. See Infex, ‘Indonesia Urged to Address Press Freedom Violations in West Papua’, 2016, www.ifex.org/indonesia/2016/12/15/press_west_papua/ (accessed 13 February 2017); West Papua Media, 2016, https://westpapuamedia.info/ (accessed 13 February 2017).


39 Body disposal varied from burials to the actual bodies being left on the surface where they had died, and dumped in wells, among others.

40 According to Dr Skinner, the intervention never took place, due to political pressures at some level; however, the reasons given were due to budget constraints; M. Skinner, ‘Hapless in Afghanistan: Forensic Archaeology in a Political Maelstrom’, in R. Ferllini (ed), Forensic Archaeology and Violation of Human Rights (Springfield, IL: Charles C. Thomas, 2007), p. 264.


44 Gillian Fowler, personal communication, 5 May 2017.


55 E. Cabrera, ‘Un Sindicato Noruego Financia las Exhumaciones de Memoria


69 J. Garmany, ‘Drugs, Violence, Fear, and Death: The Necro- and Narco-


