MULTIVARIATE ANALYSIS OF WAR CRIME BEHAVIOUR: IMPLICATIONS FOR THE INTERNATIONAL CRIMINAL COURT

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Abstract

To prosecute perpetrators of war crimes the International Criminal Court (ICC) must connect the physical actions of the offence and 'most responsible' offenders charged with planning, instigating and intent on carrying out crimes of genocide, crimes against humanity, war crimes and crimes of aggression. To date there has been no empirical study of the types of physical actions that make up this offence. There is no baseline knowledge to contextualize the offence and enable the ICC to make links between the actions on the ground and a perpetrator's culpability.

The purpose of this study was to produce the first multivariate model of war crime ground action using cases of war crime offences in Cambodia and Rwanda. The aim was to first identify a representative range offence behaviours, and secondly determine if ground actions could be differentiated into distinct forms of offending that indicate culpability, that is, knowledge and intent in carrying out the crime. Lastly, offence behaviours assessed to determine if external factors could account for variances in offender behaviour, and help the ICC account for variances in behaviour when making inferences from the models. This was achieved through content analysis, cluster analysis, smallest space analysis and multivariate analysis of variance.

It was found that as many as 44 different killing and disposal methods are used over the course of war crimes in Cambodia and Rwanda and that these offence actions can be classified into four distinct themes of behaviour. The indentified conservative, expressive, integrative and adaptive theme demonstrates that offenders were committing war crime offences in different ways. Using the underlying theories attached to each mode the ICC can infer the culpability of an offender based on which theme their actions fall into. In this case offenders subscribing to the conservative theme are likely to reflect the planning and instigation components of a war crime and offenders whose actions fall within the expressive theme are likely to be using war crimes as a cover for personal gratification and gain. Finally it was found that variances of behaviour can be attributed to the geographical location and timing of the event, and helps the ICC target their investigations to locations and periods linked to conservative behaviour, the offender who performs it and thus their culpability.

This study shows that multivariate analysis can contextualize ground actions in manner that allows the ICC to make informed decisions of perpetrator culpability during war crimes.

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Introduction

1.1 The research problem

After an international crime has occurred the Office of the Prosecution (OTP) within the International Criminal Court (ICC) is tasked with investigating and indicting those most responsible. That is, senior leaders who instigate plan and co-ordinate (SáCouto and Cleary 2007) the accumulative actions it takes to persecute and kill a population group. The ICC determines who is most responsible but has no objective criteria for doing so, except that their actions are indicative of planning. The systematic manner in which actions on the ground are carried out can reflect planning, but senior leaders rarely carry out these physical tasks. A point raised by human rights groups in the Democratic Republic of the Congo (DRC), who 'accuse[d] the prosecution of looking to secure quick convictions, rather than striving to capture a representative range of crimes committed' during conflicts in that country (Glassborow 2008). Capturing a representative range of crimes can be achieved through empirical analysis of the ground actions left at crime scenes carried out by subordinate offenders. It is the superior offenders that provides the commands for such crimes and are disengaged from the physical acts of violence, yet they are liable for what happens on the ground. It is argued here that an empirical mode of subordinate ground actions will capture a representative range of crimes that can then be linked to the most responsible offenders and assist the OTP establish culpability of individual offenders. To find a perpetrator criminally responsible for their actions the ICC is required to demonstrate that the "material elements are committed with intent and knowledge" (UNGA (1998). Rome Statute. UN Document A/CONF.183/9 Article 30. Para. 1). Proving the intent of the superior offender is challenging, not just because they are disengaged from the physical acts of the crime but because there are no means to say with certainty that a person truly intended their actions. The ICC is also charged with determining the knowledge of the offender, that is, if they knew that their individual actions were contributing to a larger crime that breaches international law. This legal burden can incorporate the actions of the subordinate offender and so forming a model out of a representative range of offence behaviour could conceptualize the material elements of the offence. This, in turn can provide the ICC with information investigators can draw upon to make evidentiary inferences about the superior and subordinate offender. There have been few examinations of the range of ground actions performed by subordinate offenders or how these material elements can be used to infer the intent and knowledge of the indicted offender. However, analysis of refugee interviews and the Atrocities Documentation Survey (ADS) of the Darfur conflict by Hagan and Rymond-Richmond (2009) revealed that collective actions of the Sudanese Government and the Jingaweit militia could infer genocidal intent. They suggest that the culpability inferred from their collective impact the two groups had on the targeted population, as racial epithets were reported more often when the two groups attacked together (Hagan and Rymond-Richmond 2009).

Investigative psychology offers a solution for the need to develop theory-building knowledge as it provides scientific grounding of anecdotal information (Canter and Youngs 2003) and findings are used to make inferences of use to police investigations (Canter and Alison 2003). The formation of knowledge with scientific grounding is required in this study as it aims to assist in the investigations of war crimes and the information to be used during ICC proceedings, subjective anecdotal information cannot withstand cross examination as effectively as scientific data. The move towards scientific methods is required because descriptive accounts of social events provided by historians, or any other social source are inadequate for theory building and testing (Bryant 2000). This includes witness testimonies, which are the predominant sources of information about offender actions and form of evidence used during prosecutions. Therefore, the following study will apply an investigative psychology framework to a new domain of war crime behaviour. It will identify the range of ground actions performed by subordinate offenders and explore the co-occurrence of these behaviours to reveal underlying types or themes of violence. It is argued that multivariate analysis of this behaviour will support inferences about offender culpability more evidentially. Firstly, the remainder of this chapter will set out the legal framework of international crimes and the components that validate the development of this research.

1.2 International Crime and the International Criminal Court

As a consequence of the World War II and the Nuremberg Trials the concept of "genocide" as a crime was formed. Raphael Lemkin (1944, 1947) drafted its criteria and the United Nations developed the Convention on the Prevention and Punishment of the Crime of Genocide (1948). Article II of the genocide convention states:

In the present Convention, genocide means any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such:
(a)Killing members of the group;
(b) Causing serious bodily or mental harm to members of the group;
(c) Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part;
(d) Imposing measures intended to prevent births within the group;
(e) Forcibly transferring children of the group to another group.

The convention forms part of the modern Rome Statute of 1998 adopted by 122 States who have accepted the jurisdiction of the first permanent International Criminal Court (ICC) established in 2002. The Rome Statute governs the international crimes of genocide, crimes against humanity, war crimes and the crime of aggression. *War crimes* has a general and specific classification, the term can cover the three main categories of international crimes; crimes against peace, crimes against humanity, and genocide, the gravest of all crimes (Kittichaisare 2001, Yacoubian 2003), as well as

having its own specific category (Simon 2007). For the purpose of this study the term will be used in its general context and encompass all the international crimes, because all crimes include inhumane treatment and wilful killing. The legal distinctions are beyond the focus of this study and a matter of legal and scholarly debate (Wald 2007).

The mandate of the International Criminal Court (ICC) is to impartially investigate crimes that contravene International Criminal Law, specifically breaches of the Rome Statute 1998. The Statute encompasses The Geneva Convention 1949, and prohibits acts that harm a population including wilful killing, torture, inhuman treatment, destruction and appropriation of property during an international armed conflict (UNGA (1998). Rome Statute. UN Document A/CONF.183/9 Article 8. Para 2). Consequently, the ICC formed four prosecutable crimes; genocide, crimes against humanity, war crimes and crimes of aggression, which incorporate these acts. Countries and state parties are collectively accused of carrying out these crimes, but criminal proceedings focus on the individual accountability of perpetrators. A person is "criminally responsible and liable for punishment for a crime within the jurisdiction of the Court only if the material elements are committed with intent and knowledge." (UNGA (1998). Rome Statute. UN Document A/CONF.183/9 Article 30. Para. 1.) The *intent* and *knowledge* elements are pivotal evidential requirements for the Court to secure a conviction. Establishing that a perpetrator is *intent* on destroying a population group through their actions can mean the difference between an individual being prosecuted for supreme crime of genocide, rather than crimes against humanity (Schabas 2012). As highlighted in the reluctance to class the conflict in Darfur as war crimes or genocide (Hagan and Rymond-Richmond 2009). The demonstration of knowledge is central to crimes against humanity convictions because perpetrator acts are committed "as part of a widespread or systematic attack directed against any civilian population, with knowledge of the attack" (UNGA (1998). Rome Statute. UN Document A/CONF.183/9 Article.7. Para. 1.) Subsequently, the ICC needs to be able to individualise the conduct of the offender from the perpetrator group to determine their actions can be attributed to any of the international crimes. It is argued that a multivariate model examining the variations in ground actions would assist in the ICC in developing a representative range of crimes that conceptualizes the behaviour of groups and individuals.

1.2.1 The perpetrator

War crimes are collective crimes, an accumulation of violent and life-limiting actions carried out by perpetrator groups including state parties, army, militia and civilians. To prosecute for war crimes the ICC is required to identify the perpetrator group, distinguish the most responsible offenders within the groups, and the individual actions of that most responsible perpetrator. Differentiating the conduct of an individual from a collective group is difficult because individuals often model their behaviour after other offenders or observed offences, which results in a series of leaders and followers (Alison and Porter 2005) who can produce the same types of actions. Verbal communication between

the group members can differentiate the leaders from the subordinates (Alison and Porter 2005) but this information cannot be recovered from the crime scene. Demonstrating verbal communication is difficult, physical evidence of this communication network needs to be presented in Court to infer the leadership role, and given the disengagement between perpetrators who co-ordinate and plan war crimes and the subordinate carrying them out further restricts the connection between the material element of the crime and the superior offender. Bridging this evidential gap and attaching the ground actions of the subordinate to those charged with co-ordinating them would assist the ICC to connect war crime leaders to events where evidence of verbal and written policies are absent. This study is focusing on the physical evidence of war crimes rather than the verbal because of the probative value of tangible evidence and its benefit to criminal investigations (Klinkner 2012). Additionally, the crime scene evidence can be used to determine how subordinates are implementing the orders of leaders, that is, are subordinates consistently performing the same modes of offending or do some operate under an agenda outside war crime offence activity.

1.2.2 Legal intent

When indicting an individual for their role in war crime their actions must fit a crime that is subject to international sanctions (Kittichaisaree 2001). Subsequently, it must be established that their actions were committed with intent and knowledge. Intent, in national court systems is the difference in deciding if an act of murder has occurred rather than manslaughter, i.e. the perpetrator set out with the intention to kill their victim, rather than death being secondary to perhaps robbing the individual (Edwards 2008). Intent, in international court is more complex because for a crime to be considered genocide the emphasis of intent is attached to the objective, that is, to destroy a population group. In reference to crimes against humanity the intent refers to the fact that the perpetrator must have intent to commit the underlying offences (Schabas 2012), that is execute, murder and torture and so on. Nevertheless when investigating any crime the court requires evidence of an offender's physical conduct or act associated with a crime (*actus reus*) and guilty mind (*mens rea*) (Dux 2011) to determine culpability. Actus reus during war crimes refers to the conduct of the offender, either by formulating a government policy/ideology which restricts the living conditions of a population group causing their death. Or, planning, organizing and implementing the killing, torture and disposal of a population group. Actus reus can be demonstrated through the physical actions of the offender recorded in state documentation, recounted in witness testimonies and demonstrated in forensic investigations. It is whether these actions are carried out with *mens rea* that determines the gravity of the crime. Also, mens rea can be the distinction between individual roles of (superior perpetrator) leader, organizer, instigator or (subordinate offender) accomplice, conspirator and executioner (Kittichaisaree 2001). Mens rea can be inferred from a states organizational policies that result in mass killing (Simon 2007), polices are set out by the leaders, organizer and instigators.

In terms of mens rea in the Cambodian conflict evidence of organizational policies that imposed life limiting measures on the population were recovered from official government documentation and communications (Kiernan 2008, Caswell 2010). This evidence was used to indict the four Khmer Rouge leaders who formed them, without documented policies the court relies on witness narratives, expert testimony and physical evidence (Klinkner 2009) to infer criminal objectives (Hagan and Rymond-Richmond 2009). Inferring the intent of superior offenders and instigators without documented official polices is then dependent on the actus reas of the executioners implementing the 'unwritten' policies. As is the case in Rwanda where witness testimonies were tampered with and evidence destroyed (Des Forges 1999). Without knowledge of executioner conduct inferring a state wide objective is problematic, because it is not possible to identify which actions are the result of the state objective and which are attributable to individual offenders using the cover of war crimes for personal gain. In order for the ICC to pursue the appropriate and most responsible individuals the Court needs to be able to differentiate their actions. Arguments during the International Criminal Tribunal of Rwanda suggested that the mass killing in Rwanda was the result of civil war and self-defence of the general population (Hintjens 1999), not a state objective to target and destroy a particular population group. Therefore, multiple modes of offending could occur during war crime, one that reflects the ideology of the state party and one that reflects the subordinate perpetrator because having different objectives when carrying out a crime is reflected in an offender's behaviour and style (Salfati 2000). The ICC must be able to determine what physical actions represent the material actions of the superior offender in order to infer their intent and subsequent criminal charge, and a multivariate mode examining these actions would inform the ICC in making these decisions.

1.3. Perpetrator distinction

The distinction between individuals giving the orders to kill and individuals carrying out the physical act of killing is important to war crime investigations because following orders forms part of a defence argument. It stems from the 1947 Nuremberg Trials established to prosecute perpetrators of the Holocaust and where "following orders" became synonymous with the trials, so much so it is referred to as the "Nuremberg defence" (Liang 2010). This argument is used to deflect from the ICC's mandate to prosecute those deemed most responsible a title reserved for those who give orders, that is, the organisers, planners and instigators of the crime and removed from the act of killing (Akhavan 1996, Simon 2007, Ronen 2014). The most responsible perpetrators are those with the intent to carry out a war crime, but those carrying out the orders may not have the same objective, hence the following orders defence. Furthermore, the intent of the crime "does not reside in an individual mind" (Simon 2007 p. 36), but proving intent is difficult.

A comparable analogue to war crimes and the problems the ICC face in prosecuting the most responsible is that of soldiers and their intent during conflict (Bakker 1989, Doris and Murphy 2007,

Passini and Morselli 2010). Debates include whether a soldier should be legally responsible for actions that breach international laws, or should the responsibility ascend military ranks. This argument is so entrenched in legal debate that the Rome Statute makes a specific reference to superior and subordinate relationships. It states that "A military commander or person acting as a military commander shall be criminally responsible for crimes within the jurisdiction of the Court committed by forces under his or her effective command and control" (UNGA (1998). Rome Statute. UN Document A/CONF.183/9 Article 28a). This appears to discount the responsibility of the low ranking individual and their contribution to crimes, but the Statute also states that an individual is responsible "for the purpose of facilitating the commission of such a crime, aids, abets or otherwise assists in its commission, including providing the means for its commission." (UNGA (1998). Rome Statute. UN Document A/CONF.183/9 Article 25. Para 3c). Therefore it is possible to charge an individual with conspiracy to cause the crime and not necessarily the crime itself, if it was organized by a superior rank or group. Being able to show that the ground actions of the subordinate offender is complicit with the objectives and sanctions of the superior offender will assist the ICC in determining which offenders fall within the Courts remit, and the offenders who are not complicit with superior orders should be referred to more suitable national and domestic forms of justice.

The difficulties associated with prosecuting individuals who carry out collective killing is highlighted in the trails for the My Lai massacre, Vietnam in 1968. Events resulted in 26 US marines being indicted for war crimes having raped and killed civilian women and children, however only the platoon leader was found guilty (Daniel 1972). During the trial it was said that soldiers were not given explicit orders to kill and rape all villagers, but perhaps the orders were implied through improper communication, and therefore they were not legally guilty of their actions, but morally (Doris and Murphy 2007). This argument was contradicted by other soldiers from the platoon, who claimed to have disobeyed commands because they were conscious of the illegal nature of the actions. Determining who was following orders and who was not was reflected in the actions of the individual, those who performed the actions and those who refrained. The same principles can be applied to war crime offenders, those complying with orders would perform actions in a prescribed and proficient manner and those desisting will either refrain, or kill using a wider variety of actions. Differentiating the range of ground actions could assist the ICC in deciding on individual culpability during specific mass killing events. However, there is no established prevalence of ground actions used during war crimes, so, determining if an offender is following a prescribed and sanctioned method of killing, or not, can only be resolved through the identification of different modes of offending during mass killing events. Additionally war crimes are performed by a range of perpetrator groups such as police, military and civilian, each with their own command structure and perhaps individual modes of offending. This further complicates the ICC's task in determining which offenders are most responsible as decisions may be based on the actions of subordinate offenders which do or do not reflect the commands of their respective leaders. This intricate connection between individual

responsibility, rank, and civilian is highlighted by the Rwandan genocide where civilians contributed greatly to the mass killing, so much so that superior responsibility was also applied to civilian leaders for the first time, as in the case of Clément Kayishema (ICTR. Case No. ICTR-01-95-1-A. Prosecutor v. Clément Kayishema & Obed Ruzindana).

1.4 Behaviour

There has been no examination of the variety of ground actions exhibited during war crimes yet the ICC uses the manner in which the material element of the crime is carried out to infer intent (UNGA (1998). Rome Statute. UN Document A/CONF.183/9 Article 30. Para. 1.). Knowledge of the material element is lacking and none of the four crimes formulated by the ICC have an empirical model of the types of ground actions committed during war crimes. The terms wilful killing, inhumane treatment and torture are set out in the legal definition of war crimes, but they are broad terms that encompass groups of single actions such as, beating, burial and restraining of victims. What specific types of actions associated with the generic terms is unknown but witness testimonies recount these specific actions, for example "These classes were killed by being beaten to death with poles." (Kiernan 2008, p. 291). It is witness narratives describing the individual ground actions that are used by the Court to form an accumulative picture of events, and build a case against the superior offenders when used in conjunction with forensic evidence. Yet, to date, there have been no multivariate examinations of how actions during mass killing events co-occur and whether there are any sub-sets of collections of behaviour which would help provide an empirical model to support ICC investigations. This would help to develop knowledge of the material elements of war crimes and allow the ICC to examine sub-sets of ground actions to help establish the intent of the superior offender and knowledge of the subordinate.

1.4.1 Criminal behaviour

It has been suggested that physical evidence left at a crime scene can help to infer characteristics of the offender (Salfati and Canter 1999 and Salfati 2000, 2003). This assumption is derived from the theory that there is variation in killing methods, for example, levels of aggression and instrumental goals of offenders. The early conceptual mode by Salfati and Canter (1999) describes two subsets of offenders, those that can be differentiated as instrumental or expressive. Instrumental aggression is planned and used to gain items of monetary value or power and control (Canter and Fritzon 1998), in doing so the victim is used as a vehicle to achieve such goals, but in an emotionless manner (Meloy 2006). Expressive aggression is more emotionally driven and reflects a personal relationship between the offender and the victim, for example, revenge, jealousy, fear or anger (Thijssen and De Ruiter 2011). Salfati (2000) when empirically examining the nature of murder showed that crime scenes could be differentiated into expressive and instrumental types. Her results suggested that variables such as neck wounds, manual wounding, using a weapon from the scene, and

whether the victim was found naked formed part of the instrumental theme, whereas, face wounds, multiple wounds, victim being blindfolded and body hidden were considered part of the expressive theme (Salfati 2000). A similar approach could be applied to war crimes as those who are instrumental may be violent sufficient enough to follow orders, whereas those with a more expressive element could be an indication of over-zealous use of force. This could help to identify those who should be individually culpable for their actions. However Cornell *et al*. (1996, p. 788) argue that there is no absolute distinction between instrumental and expressive violence "instrumental offenders can be identified by the presence of instrumental acts of aggression but not necessarily the absence of reactive aggression". This presents problems for viewing variations of killing methods as being a simple dichotomy and the application of this model to may be ultimately limited given the complex framework of offenders and their range of criminal motives.

Another dichotomous model of organized and disorganized offender behaviour could also help classify war crime behaviour. Ressler *et al.* 1986 suggest that evidence left at a crime scene during serial sex offences reflect whether an offender is organized in their undertaking of the crime or not. Organized offenders will plan this offence, bring weapon to the scene, restrain victim and remove traces of their criminal activity from the scene, whereas disorganized leave evidence and display body in open view (Ressler et al. 1986). From a war crime perspective it can be argued that subordinates performing under instruction would demonstrate organized behaviour and disorganized behaviours reflect other offenders. However, Canter's et al. (2004) empirical assessment of the typologies determined that there was no discrete sub-set of offence behaviours that could be regarded as belonging to one organised or disorganised, instead most offences were organised but with disorganised features. The inability to classify some offenders is because models are formed on the range of behaviours exhibited by all offenders in the sample, and the dichotomy is formed from the extremes of the sample. Offenders do not always operate at the extremes of the spectrum and perpetrators who demonstrate both the instrumental and expressive themes would be difficult to classify.

With the exception of Hagan and Rymond-Richmond's (2009) examination of refugee interviews the first attempt to specifically apply an investigative psychology model to war crime behaviour using empirical methods was recently made by Hollows and Fritzon (2012). Their study demonstrated the complexity of perpetrator behaviour exhibited during Bosnia's 1995 genocide. They determined that four types of offender contributed to events, the *Adaptive, Expressive, Conservative,* and *Integrative* perpetrator. The expressive and conservative offender's mirror that of the expressive and instrumental dichotomy associated with murder (Salfati 2000) and reflects the extremes of a war crime behaviour spectrum. These behavioural dichotomies are perhaps indicative of the leader and the follower, or, military and civilian relationships the ICC need to acknowledge in order to differentiate the most responsible offenders for prosecution. The additional adaptive and integrative type of perpetrator is indicative of the complexity of war crimes as it consists of different offenders

performing multiple acts, all contained within the framework of one war crime. The additional themes of behaviour could be attached to the offenders whose conduct lies between the extremes of the expressive and instrumental dichotomy. Each of the themes in the study is indicative of a type of perpetrator and distinguishes between political leaders (conservative theme) and those at the forefront of violence (adaptive) (Hollows and Fritzon 2012). There are methodological problems with this initial study because the variables attached to the themes are not explicit action, instead general terms associated with violent conduct, for example 'exterminate' and 'murder' forms part of the adaptive theme. Arguably this can be improved upon with a more objective content dictionary of ground actions, as proposed by this thesis. Although their study fulfilled its aims of gaining an understanding of war crime perpetrators its evidential assistance to the Court is limited because of the lack of explicit actions attributed to those perpetrators. Knowledge of explicit actions means inferences about the offender can be made from physical evidence recovered from the crime scene, such as use of firearm or restraining of victim. Being able to retrieve physical evidence of actual behaviours can assist the ICC in demonstrating the behaviour of an offender under investigation and therefore infer their intent, knowledge and level of responsibility. Whilst Hollows and Fritzon has initiated research in this area this thesis aims to develop empirical models using multivariate techniques such as Cluster Analysis and Smallest Space Analysis. This is to provide a more practical application of the ground actions data so to assist the Court in determining offender's charges and culpability. The empirical models will be explored in detail in method section of this thesis (See Chapter 2).

1.4.2 War crime behaviour

Those deemed most responsible are classified as such because of the actions they took to plan, organize and implement war crimes. Actions including forming governmental policies that restricts the lives of a population group, forming list of individuals to be killed, or, giving the command for others to kill. The key to their prosecution is demonstrating that planned and organised killing occurred and this requires the identification of actions that are indicative of planning (Park 2010). In Hollows and Fritzon's (2012) study particular variables such as orders, logistics and inhumane treatment were attributed to the conservative theme. This theme is associated with the organisational elements of Bosnian war crimes and suggests that particular actions can be used to demonstrate planning. This information can then be used to differentiate actions that can be linked to superior offenders from those who may be offending during war crimes for personal gain and outside the mandate of the ICC.

Work by Porter and Alison (2001) on the decision making, actions and orders of offenders during gang rape discovered that leader influence was most prominent during the victim approach and disposal stages of the crime. They found that those who decided on the method of disposal play some part in carrying out the decision, and the physical act. This finding when using war crime data could assist the ICC in determining which perpetrators are indeed responsible for specific acts. In a letter

from the United Nations Security General to the President of the Security Council outlining evidence of breaches of humanitarian law in the Former Yugoslavia, different disposal methods of victims, and who might be responsible were proposed as part of the evidence. "In most camps (particularly during the second half of the 1992 and the first half of 1993), prisoners are killed on a daily basis. Their bodies are sometimes left to rot on camp grounds, disposed of in mass graves abutting the camps and thrown into rivers, ravines, mine shafts and mining pits...Often sick and wounded prisoners are buried alive in mass graves.....These violations are ordered by or known to the camp commanders, the local political leadership and police. Army units may or may not be involved. However they do not intervene to stop these violations, thereby implying responsibility by omission." (UNSC (1994). UN Document S/1994/674 Page 54-55 Para: M-P). Taking into account the conclusions of Porter and Alison's (2001) work it could be suggested that because camp commanders may have given the instructions to perform a specific method of disposal they are likely to have physically carried it out. However, the hierarchical dynamics of gang rape may not be comparable to the ranking order in place within war crime perpetrator groups, nonetheless it is argued here that the method of disposal specifically could connect the subordinate action to the superior offender. This connection could assist the ICC in determining the culpability of individual superior offender's who were in charge during the suggested timeframe, based on disposal method alone. Furthermore, if additional ground actions can be established through physical evidence, such as rape or extreme forms of violence, which could demonstrate that a subordinate has gone above and beyond the camp commanders instructions they too may be subjected to individual culpability investigation. The implication of these findings validates the idea of using ground actions to analyse perpetrator behaviour as they attached tangible evidence to responsibility for pertinent parts of war crime events. Examining physical actions adds probative value to results, and counters the practical limitations of Hallow and Fritzon's (2012) study because they can be used to differentiate between offender types, that is, subordinates implementing instructions from other offenders with their own criminal objectives. Variations in behaviour could also be used to differentiate between groups of perpetrators such as the army and camp commanders, army and militia and this will be explored further using perpetrator type as a variable in assessing variance of behaviour (see Chapter 7).

Extreme forms of violence when killing targeted groups can also contribute to establishing an offender's intent or knowledge in performing a war crime. Perpetrators who claim they were following orders and unwilling to kill would have actions fitting that frame of mind (Felson and Messner 1996, Marit and Dan 2011). Although there are no empirical models of specific modes of killing during war crimes anecdotal evidence within official speeches and documents tend to set the standard of how killing occurs. In Cambodia the common way to kill was to "smash" the victim on the back of the neck with a blunt instrument (Kiernan 2008), Rwanda "hacked" with a machete (Verwimp 2006) as people were urged to "reach for the top part of the house" a traditional location for storing a machete (Prunier 1995 p.221). These methods of killing are efficient given the

availability and lethality of weapons, whereas the stringing up, smashing and slitting of throat of a single victim requires greater exertion. Arguably the use of multiple combinations of actions is suggestive of a conscious decision by a subordinate offender to go beyond what is needed to kill. Therefore, it could be suggested that extreme actions may not reflect the objectives of the superior offender, and subordinate offenders performing them could be differentiated from those simply implementing commands. Given Zipf's Principles of Least Effort (Zipf 1949), which postulates that it is human nature to undertake an activity using the minimal effort required to complete a task, it would be expected that subordinate offenders would carry out orders without exceeding what was required to complete it, if they were reluctant to participate as claimed. The differentiation between what can be classed as extreme and what can be classed as baseline violence is important to war crime investigations because it is the baseline behaviour that are likely to indicate the organization and planning of the crime. The occurrence of behaviours outside of core actions could suggest individual style, and not following orders, which opposes the defence argument.

The concept of overkill corresponds with the expressive behaviour theme identified by Hollows and Fritzon (2012) as it contains the variables of mutilation and dehumanization which are linked to perpetrators that have internal motivations (Canter 2010). The lack of precise killing actions attached to themes in their study means that inferences about the intent of the offender can be open to interpretation. For example if machete and 'smash' formed part of the conservative theme, associated with superior offender (Hollows and Fritzon 2012) it can be argued that subordinate offenders using this action may be implementing state objectives. If this is the case it could be argued that specific methods of killing could be considered to be sanction by the governmental regime. Therefore perpetrators who use them are complicit with the objective of committing a war crime and following orders. At the other end of the spectrum if a perpetrator uses killing methods not associated with the conservative theme it can be argued that they had a personal objective and if demonstrating over kill, going beyond orders perhaps indicative of their willingness to kill. This added evidential dimension was overlooked by Hollows and Fritzon (2012) and why this study shall be examining the explicit behaviours associated with war crimes.

1.5 Physical evidence

During war crimes tribunal's evidence is often communicated as qualitative information, such as witness statements, documentation, or the opinion of experts (Klinkner 2009). Although witnesses can attest to events the qualitative nature of the evidence is open to subjective argument. Consequently, tribunals have become increasingly reliant on scientific methods that withstand rigorous questioning and corroborate witness accounts with more empirical techniques. The empirical analysis of trauma patterns of victims from Srebrenica proved important in demonstrating that the victims did not die as a consequence of war as proposed by the defence, but executed as part of a selected group of people, a key component of war crimes prosecution (Kimmerle and Baraybar 2008,

ICTY, 2004, Case No. IT-98-33-A, *Prosecutor v. Krstić*). Forensic anthropological analysis of the victims confirmed selective killing by establishing that victims were from the targeted demographic (Muslim men of fighting age) and the methods used to kill were systematic in that they included blindfolds gunshot wounds to head and upper body. This information was consistent with accounts and therefore contributed to prosecutions because of the tangible proof (Blewitt 1997) but not all ICC investigations can benefit from forensic investigations to support evidence investigation due to costs, time and historical nature of the events (Klinkner 2012). Consequently other means of confirming patterns of behaviour outlined by witnesses are required to support arguments of systematic methods of killing and thus intent of superior offenders to implement war crimes.

Forensic evidence used by the ICC comes from mass graves excavation and examination of its contents, including the analysis of the deceased (Skinner *et al.* 2003). A report by Dean Manning (2000) synthesized findings from fieldwork and labs, and presented systematic evidence of how killing and disposal of victims was carried out in multiple locations in Bosnia. The report confirmed witness accounts of grave locations and contents enabling the Court to use the ground actions of offenders to demonstrate preplanning of graves, patterns of victim selection, and mass executions (Klinkner 2008). This connection between the witness accounts and physical evidence can be strengthened by incorporating knowledge of themes of perpetrator behaviour. For example evidence of firearm use, attributed to the integrative theme said to be conducive with offenders who target victims personally significant to them (Hallow and Fritzon 2012 p. 459). It could be argued that the use of the firearms in this case do not form part of the systematic actions that represent the superior offender which could assist the ICC in differentiating between actions of subordinates that link to superior commands and other offenders.

1.6 Victims

Offender behaviour can depend on the interaction with victims, resisting an attack can force an offender to change their behaviour and the type of victim can also influence how a perpetrator carries out a crime. If a victim is known to the perpetrator, as is often the case in rape (Feist *et. al.* 2007) it may affect the outcome of the rape (Ullman 2007). Canter (1995) created a model of criminal behaviour based on how offenders view victims and determined that modes of offending can reflect this relationship. Offenders who view their victim as a person are more likely to display intimate forms of behaviour, which is often the case of rape, whereas victim as vehicle is connected with instrumental modes of offending. Victims targeted during war crimes would be viewed as vehicles and objects because they are used by the regime to gain power and political control. In Stanton's Eight Stage of Genocide (Human Rights Watch 1998) it was determined that in the stages leading up to the extermination of the population group victims are 'classified' and 'dehumanized'. These elements of a war crime can assist subordinate offenders to consider their victims as non-human and in turn help them justify their actions. Consequently, ground actions associated with how the

perpetrator views the victim can also contribute to the differentiation of offenders implementing superior command from those who view the victim as a human and thus a person. This distinction can mean the difference between the ICC holding an offender to account for following the orders of a superior commander, or for crimes with personal objectives. The distinction of offender type has not been achieved by the ICC because it has not determined how all ground actions associated with the crime reflect perpetrator behaviour. The Court focuses on the key and obvious forms of violence but without examining all ground actions the evidence derived from the frequent actions can be limited.

1.7 Collective evidence

The connection between victim and perpetrator is important in war crimes because it is the identification of the victim group that determines the type of war crime (Kittichaisaree 2001). Victims must constitute an ethnic, racial, religious or national group (Komar 2008) to be protected by international law. When there is an element of doubt of who victims are there is a gap for the defence to argue that war crimes were not committed but those killed are from the general civilian population, or soldiers from ongoing civil unrest, and not applicable to the ICC's mandate. To counter these arguments the Court relies on forensic examinations of victims exhumed from mass graves (Skinner *et al.* 2003). Forensic evidence for group identification relies on anthropological analysis of human remains and the associated tangible artefacts and symbols which may not match the group classification criteria (Komar 2008). It has been known for objects to be removed from those killed to prevent identification, and objects have been added to the remains of those killed to add to the uncertainty. In Bosnia entire mass graves were moved and contents mixed in an attempt to avoid identification (Skinner *et al.* 2001). Forensic examination of the contents of a number of graves throughout Srebrenica were able to be linked because artefacts such as blindfold, ligatures and building debris which came from the same source (Manning 2000). From the multiple graves the Court was able to demonstrate that when the contents are examined together they corroborated the account of a witness who escaped the killing. The mass graves were the result of execution of Muslim men and boys who had been separated from the rest of the population (Wright 2010) and not soldiers killed in combat as proclaimed by the defence. Further evidence that the killings were the result of execution rather than combat was the forensic anthropological analysis of the individuals exhumed from the linked graves (Manning 2000). Alone the pattern of injuries may have been inconclusive because of the use of grenades, but when examining all individuals in a single event the number of individuals shot in the head was too high to dismiss, given the killing and wounding ratio's suggested for conflicts (Coupland and Medding 1999).

The value of combining the findings from multiple graves and results of forensic investigations has proven effective because it highlights patterns across different site locations, and this approach to examining evidence can be extended to witness testimonies. Witness accounts have been effective when multiple individuals give the same account of their experience, as shown in both

Rwanda, and Bosnia, whereby the patterns of sexual violence became recognised as war crimes (Askin 1999, Oosterveld 2011) on the repeated testimony of women. Connor and Scott suggest that forensic archaeology "is not gathered to uncover the broad patterns of human behaviour, but rather to reconstruct the specifics of a single event"...[yet]..."The underlying premise of archaeological work is that human behaviour is patterned and the artefacts left behind on a site reflect that behaviour. From these patterns, human activity can be reconstructed." (Connor and Scott 2001, p.3). With this in mind the Court has successfully used examinations of mass graves as evidence. The International Criminal Tribunal for the Former Yugoslavia (ICTY) for example used findings from the mass grave exhumations to link seventeen different grave sites to three execution locations through the presence of common artefacts such as ligatures, blindfolds, pollen and glass (Manning 2000). In doing so the Court was able to determine that killing was organized, firstly through the presence of blindfold and ligatures on the victims, and secondly through the attempts made to destroy evidence by the state whilst they were still in control of the region. The Court used physical trace evidence to construct their evidential argument and demonstrate the organized behaviour of the perpetrators. A similar concept to that proposed by Hagan and Rymond-Richmond (2009) in their use of collective racial intent to demonstrate that conflict in Darfur constitutes genocide as opposed to civil war.

This research aims to develop upon this process of identifying patterns of behaviour but using witness narrative that describe explicit ground actions exhibited by subordinate offenders during war crime killing events. In doing so it aims to develop an empirical model which will help to differentiate offenders implementing superior perpetrators commands from offender outside the ICC's mandate using crime behaviour models. Hollows and Fritzon (2012) have already demonstrated that offender behaviour during war crimes can be differentiated into themes that distinguish organization and planning from offenders with personal objectives. However because they did not use explicit actions the probative value of their study is limited as it does not work to corroborate witness testimonies or assist forensic investigation. This study will develop upon Hollows and Fritzon study but using ground action variables that can be recovered from crime scenes e.g. firearms, machete and cremation of victims. It is argued that the use of tangible evidence to create empirical models of war crime behaviour can assist the ICC in the practicalities of investigating offence activity and in deciding the culpability for both superior and subordinate offenders.

1.8 Practical implications

The success of the ICC can be measured in the number of prosecutions and the deterrence of repeated crimes. However, "the ad hoc tribunals have been too costly, too inefficient and too ineffective....they exemplify an approach that is no longer politically or financially viable" (Zacklin 2004 p.545). Measuring success is subjective, there is a consistent call for a more cost effective judicial operation (Shany 2013). Following a review of ICC expenditure and funding Romano and Ingadottir pointed out that "...a sufficient budget might enable the Court to carry out its mandate while

a restricted one might limit its operation. In addition, the adopted budget will reflect policy making of the court, because while the budget determines resources, it also prioritizes the Court's activities" (Romano and Ingadottir 2001 p.28). Consequently, streamlining the judicial process without compromising the level of success would be an ongoing objective of the Court. The time and financial costs the Court incurs can be due to bureaucracy and the type of evidence used. Gathering witness testimonies and forensic evidence consumes Court time and financial resources. This has led to a call for new investigation strategies to be adopted, because even with the ICC policy of only prosecuting those they deem most responsible costs are high. In response to this the UN President of the Security Council backed an ICC decision to transfer "intermediary and lower-level accused to competent national jurisdictions" (UNSC. (2002). Resolutions Document: S/PRST/2002/21). This move was adopted to address the issue of time and cost and address a call by victims to hold to account the individuals that carried out the violent acts that constituted a war crime. A point made by a survivor of the Khmer Rouge regime in Cambodia Bou Meng, when asked about whether he thinks only senior Khmer Rouge officials should be prosecuted Bou Meng stated that "...without orders there will be no killing. But without following orders there will be fewer victims." (Vannak 2010 p. 67). Part of the mandate of the ICC is to prevent further breaches of the Rome Statute, if low-level accused were not held to account then it is likely that such individuals would participate in further crimes knowing that they are unlikely to face justice. This research would be of benefit to the Court here because of the potential to distinguish leaders and followers from their behaviour. Behavioural themes formed from precise actions can be used to infer their intent in being part of a war crime, and assist in the prosecution of followers if their actions conform to a theme suggests they have gone beyond sanctioned forms of killing. Furthermore, analysis of multiple testimonies and events will help the Court form baseline knowledge of behaviours in particular contexts which can be drawn upon to understand contextual and behavioural features of each conflict they investigate. In doing so investigators can focus their evidence gathering strategies, saving the Court time and money.

1.9 Rationale and research questions:

This thesis aims to examine the ground actions exhibited during war crimes and determine if patterns of behaviour exist that can help International Criminal Court investigations. This research has been undertaken to address the knowledge and evidential gap between subordinate offenders performing acts of war crime and the superior offenders indicted by the ICC. This will be achieved by determining what material elements of war crime performed by the subordinate offender are as a direct result of the superior offender's objective and intent on destroying a population group protected by international law. The study will investigate the killing, disposal and victim interaction behaviours that can be physically recovered from a crime scene in order to develop a multivariate model. From this the intention of perpetrators to commit war crimes can be inferred and ICC investigation strategies can be more effective.

1.9.1 Research aims

The aim of this research is to explore killing and disposal methods subordinate use during war crime offences in Cambodia and Rwanda to develop an empirical model of behaviour the ICC can draw on when investigating crimes and establishing offender culpability.

This will:

- Identify a representative range of ground actions performed during war crimes
- Explore variations of ground actions during mass killing events
- Differentiate subordinate offenders implementing war crime objective from offenders using war crimes for personal gain
- Address weaknesses of evidence used to establish intent and knowledge of a war crime offence and improve convictions of superior and subordinate perpetrators
- Add to the repertoire of evidence used during ICC investigations

1.9.2 Research objectives

The research aims will be achieved by summarizing archive documents, witness statements, court transcripts, and anecdotal evidence of killings during war crimes.

- Identify and extract killing and disposal methods used by subordinate offender from qualitative sources
- Analyse literature including witness statements, media reports and trial transcripts from two case study locations using content analysis
- Use statistical programme SPSS to quantify data and identify patterns of behaviour
- Use multivariate statistical methods to analyze results to form empirical models to be drawn upon to make inferences about perpetrator behaviour

1.9.3 Research assumptions

- Following Hollows and Fritzon (2012) it is anticipated that multivariate analysis of ground actions will reveal variations in killing methods
- The findings of the multivariate models can be triangulated with different multivariate methods and the practical utility of each should then be carefully considered in terms of which is most conducive to supporting the legal process of the ICC
- The contextual relevance of different forms of killing may be understood empirically by examining further features such as time, geography and who was present at these events.

The specific rationales, theories and methodological implications of this research will be developed in subsequent chapters.

Chapter Two
Method

This chapter will examine the two data samples used to gather the ground action variables relating to war crime offences in Cambodia and Rwanda. The sample examination will cover the data collection process, the variables identified and the analytical methods used.

2.1 Introduction

To date there has been no empirical examination of war crime behaviour specifically looking at the ground actions of subordinate offenders. Previous studies of criminal behaviour relate to domestic crimes such as murder, rape and arson all of which have produced findings that are of use to criminal investigations. This novel study has drawn on Investigative Psychology methods already established in making inferences from crime scenes. Qualitative research was the method of choice as it offers techniques that can systematically identify concepts from unfamiliar data and form research themes, without having prior knowledge of the subject (Richards 2005). Furthermore, qualitative methods are better suited for exploratory research (Bryman 2008), which given the lack of prior studies relating specifically to war crime behaviour validates their use.

2.2 Qualitative research

The purpose of qualitative research is "to document in detail the conduct of everyday events and to identify the meanings that those events have for those who participate in them and for those who witness them" (Erickson 2012 p.1451). To document detail of the "everyday events" in a manner that inferences can be made requires systematic data collection. Firstly, the concept of the knowledge to be collected in the framework of the study must be defined. Secondly, the qualitative quality of the knowledge must be highlighted to ensure credibility of the research, and that results have meaningful coherence (Tracy 2010).

According to Jenkins "All human knowledge is dependent upon classification" (Jenkins 2000 p.7). Therefore, knowledge of war crime conduct is dependent on what is classified as war crime behaviour, without any specific classification to date understanding and proposed inferences is limited. The ambiguity of what constitutes a war crime requires classification in terms of actual conduct in order for it to be transferred into useable knowledge. The quality of knowledge can impact on the effectiveness of any inferences because it must represent the truth, the information read must be a true reflection of what is being analysed. One would assume, for example, a witness testimony providing details of killing and disposal of victims during a war crime is a true representation of events from that person's perspective and subsequent knowledge can be used to form sound theories. When drawing upon a wide variety of statements from the same event the individual perspectives can be useful in corroborating and triangulating information to gain a clearer picture of what may have

happened. In qualitative research it is assumed that the narrator of the event is recounting what they believe to be true, but this may not be reality. This is not to say that the testimony is false, or that the individual is bias, but that what they are recalling is subjective, and another person may have viewed the event differently. To create a more robust and reliable body of knowledge from war crime actions a combination of factual information and analytical methods are required. Madill *et al.* (2000) argue that with the right scientific methods a truer representation of reality can be achieved. The move towards scientific methods is required because descriptive accounts of social events provided by historians, or any other social source are inadequate for theory building and testing (Bryant 2000). Investigative psychology offers a solution for the need to develop theory-building knowledge as it provides scientific grounding of anecdotal information (Canter and Youngs 2003) and findings are used to make inferences of use to police investigations (Canter and Alison 2003). The formation of knowledge with scientific grounding is required in this study as it aims to assist in the investigations of war crimes and the information to be used during ICC proceedings, subjective anecdotal information cannot withstand cross examination as effectively as scientific data.

2.3 Data access

To carry out this study permission was sought from archive managers and research co-ordinators at Kigali Genocide Memorial Centre and the Documentation Centre of Cambodia (DC-Cam) to access narrative accounts of individuals who were witness to war crimes in the respective locations. Some of the archives content is available to the public through online services but the majority of content is physically held at both facilities. To access the physical content research proposals were submitted to each centre outlining the information required, and preliminary research questions, together with Liverpool John Moores ethics approval verification. Access was granted to both archives and data was collected from the Cambodian archive in Phnom Penh over a four week period in July 2011, and in Kigali, Rwanda for four weeks in November 2012.

2.3.1 The Documentation Centre of Cambodia

The DC-Cam archive is located in Cambodia's capital Phnom Penh and documents the historical development of Cambodia with particular focus on the Khmer Rouge era (1975-1979), when the Communist Party of Kampuchea (CPK) led by Pol Pot took control of the country. Over time the radical party dispelled their moderate followers through extreme communist ideologies and were given then named "Khmer Rouge". The Khmer Rouge came to power in 1975 but the major turning point was when the party took control of the capital Phnom Penh on 17th April 1975 and implemented their political ideologies throughout the country. The Khmer Rouge wanted to create a revolutionary society whereby the economy became self sufficient agriculturally. This was achieved through population control measures including the forcible resettlement of the urban population to rural locations. The differentiation of the rural and urban population was the basic criteria the Khmer

Rouge used to target groups to be killed, the urban populations did not fit their agricultural ideology, and considered to be incapable of performing the physical work required to fulfil it. The existing rural population of Cambodia were labelled as "base" people and the urban population forced into the rural locations were labelled as "new" people (Kiernan 2008). Both groups suffered from large numbers of deaths, but one group was targeted more than another, by early 1979, approximately 650,000 new people and 675,000 Khmer base people, had died from execution, starvation, overwork, disease, and denial of medical care (Kiernan 2008). New people were targeted because they were perceived as being elite, many families living in the cities would have been educated or officials of the previous government including police officers (Kiernan 2008), better off than their rural counterparts, and likely to object to the Khmer Rouge policies. This classification, targeting, forced migration and imposed life limiting measures breaches the Geneva Convention, hence breaches the Rome Statute and amounts to war crimes that resulted on the death of at least 1.7million people (Extraordinary Chambers in the Courts of Cambodia http://www.eccc.gov.kh/en/about-eccc/introduction, Accessed 3rd March 2014). The DC-Cam archive was formed subsequent to the passing of the Cambodian Genocide Justice Act in 1994 and funding by the Yale University Cambodian Genocide Program (CGP) in 1997 to investigate the killing of the Cambodian population. Since the launch of the investigations in 1995 over 30,000 biographies of victims, 24,000 texts such as books, newspaper articles and perpetrator confessions have been deposited in the archive which documents the legacy of the Khmer Rouge (The Documentation Centre of Cambodia www.d.dccam.org/Database/Index1.htm, Accessed 3rd January 2014). For further background to the Khmer Rouge party and history of Cambodia see works of Ben Kiernan (2008).

2.3.2 Archive search

DC-Cam offers an online search of the documents contained within the archive, however there is no access to the full documents; documents can only be accessed and read at DC-Cam at the present time. Keywords can be entered into the search field and the titles of relevant documents with their unique reference number are returned (See Fig. 2.1). In the initial research phase the database was searched using keywords, and their derivatives, commonly associated with violence such as shoot and shooting, beat and beaten. This process enabled the creation of a catalogue of documents to be examined on arrival at DC-Cam. The list was emailed in advance to DC-Cam as documents had to be physically retrieved by an administrator from the archive, rather than the researcher being free to browse the archives contents.

Figure 2.1 DC-Cam document archive search screen

2.3.3 Kigali Genocide Memorial Centre

Documents held at the archive of the Genocide Memorial Centre in Kigali outline the historical development of Rwanda and putting the 1994 genocide into context, as well as collating the narratives of witnesses and survivors of the events. The historical development of Rwanda contributed to the genocidal events however, “Neither historians nor anthropologists can agree on the origins of the division that was so crucial to Rwanda’s terrible history” (Melvern 2004, p. 3). The classification of the Rwandan population occurred over a series of colonization events, a major turning point being when the Belgians took control in 1923. During this period the political landscape of Rwanda changed, and through a serious of measures the Tutsi minority were afforded political, social and economic dominance over the Hutu majority. In 1933 the Belgium administration called for a census and the whole population of Rwanda was classified as belonging to one of the 3 ethnic groups, Tutsi, Hutu or Twa, but classification was based on racial misconceptions (Des Forges 1999). Following the classification the Belgian administration were required to integrate Hutu Rwandan’s in the political process, having previously supported Tutsis being the ruling group. This was subsequent to violence, pressure from the United Nations General Assembly for a more integrated government and a Hutu manifesto calling on the population to fight for a majority rule (Melvern 2004). Throughout the 1950’s there was a power struggle between the two groups, resulting in widespread violence and deaths on both sides. In 1962 Rwanda gained independence from Belgium and through a series of electoral meetings Hutu were in power, violence continued as refugee Tutsi’s returned to invade and attempt to regain power, the Hutu government retaliated by massacring domestic Tutsi (Kuperman 2000). This forced around three hundred thousand Tutsis to flee to neighbouring countries were they

faced further persecution (Barnett 2002), reinforcing the divide between the groups. Whilst this power struggle ensued there was ongoing tension between two regional Hutu groups, those in the central and southern regions, and the northwest with a longer Tutsi influenced history (Uvin 1997). Political representatives in the northwest vied for power over the southern more populace regions of Rwanda and because of the instability a coup was carried out by Juvènal Habyarimana that shifted the political, military and economic power to the northwest in 1973 (Kuperman 2000). Juvènal Habyarimana became a central figure in the genocidal events of 1994 because of the political ideologies he disseminated throughout Rwanda when he became president, although he was a military leader initially. Although Rwanda was initially under military control with Habyarimana as the General the National Revolutionary Movement for Development (MRND) party was formed under which Habyarimana served as president. The large scale killing of domestic Tutsi began to decrease because fewer invasion attempts were made by exiled Tutsi (Kuperman 2000) which was attributed to the knowledge that invasions resulted in massacres of domestic Tutsi. Tutsi refugees then began to form rebel forces such as the Rwandan Patriotic Front (RPF) who overthrew the Ugandan government in 1986, before tackling Northern Rwanda in 1990 (Kuperman 2000). What was initially a rebel group of refugees not just Tutsis, were in fact an armed group who had been trained having been part of the Uganda's National Resistance Army (RPSA, but defected (Melvern 2004). The invading RPA was met by the Rwandan Armed Forces (FAR – French acronym) and the northern region of Rwanda was in conflict, prompting civil war. Total invasion failed as the RPF were forced back into the forested region of the north but civil violence continued as Hutu Rwandans were encouraged to kill their Tutsi neighbours by the Rwandan government (Des Forges 1999). It was not until the Wednesday 6th April 1994 that massacres on an unprecedented scale began to occur, triggered by the death of Habyarimana in a plane crash said to be caused by a missile attack as the plane was coming into land at Kigali airport (International Panel of Eminent Personalities 2000). However who carried out the attack on the plane remains unresolved, some suggest that it was planned by Habyarimana's own government objecting to surrendering power to Tutsis, others suggest that the Tutsi RPF had launched the attack in order to gain control of Rwanda, suspicion also lay with Belgian and French troops (IPEP 2000). The paranoia on all sides meant that violence escalated quickly. Between 7th April 1994 and 22nd June 1994 Tutsis were specifically targeted together with moderate Hutu, resulting in the deaths of between five to eight hundred thousand people (Verwimp 2006). The Genocide Memorial Centre in Kigali opened in 2004 through the collaboration of Aegis Trust and the National Commission for the Prevention of Genocide (CNLG) and documents much of the killing events that occurred subsequent to Habyarimana's death. When opened to the public the centre contained 20,000 documents, and 1,500 audio-visual testimonies, and is being contributed to on a daily basis. For further information of the historical development of Rwanda and the contribution to the genocide see works by Linda Melvern (2004), Alison Des Forges (1999) and Gerard Prunier (1995).

2.2.4 Archive search

A major component of the archive is audio-visual testimonies, most are given in Rwanda's common language Kinyarwanda, but some are provided with a transcript translated into English (See Fig 2.2). A search field is available which searches the translated transcripts, it enabled the search for terms relating to war crime actions previously identified during data collection in Cambodia and types of violence referred to in literature. The audio-visual accounts are available on the memorial centre's website but limited in number, additional testimonies are available on the memorial centres internal network, which were accessed at the centre in Kigali, documents such as research, media and governmental reports are also available on the network. The memorial centre is continuously collecting and translating testimonies to add to the archive, however not all are accessible to the public to date, access was granted to this material during data collection. Having not been added to the internal network the content of the testimonies was not searchable and required manual searching for relevant information. Additional information was gathered from books containing collections of witness narratives, held at the Kigali Memorial Centre and the National Commission for the Prevention of Genocide (CNLG) office's library.

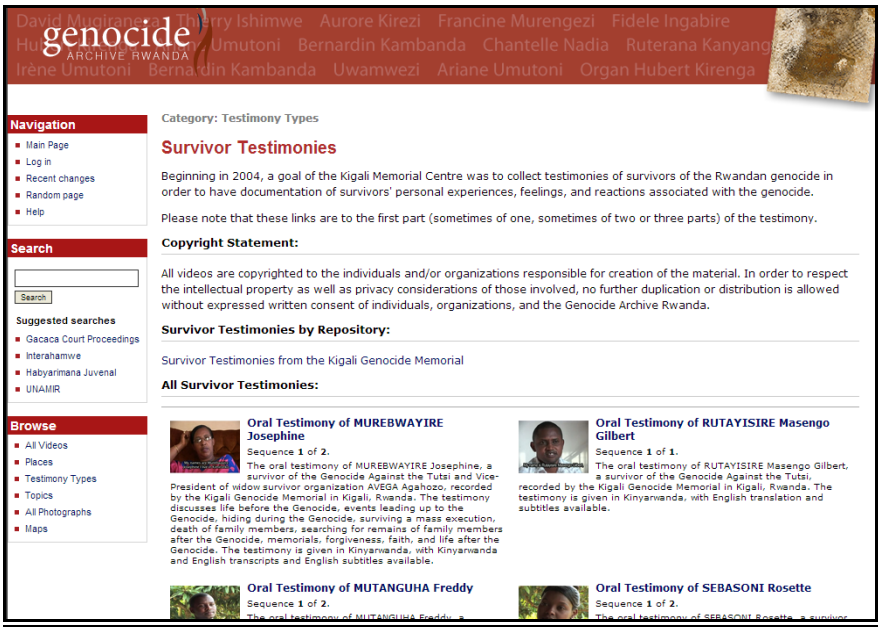

Figure 2.2 Kigali Memorial Centre audiovisual archive search screen

2.4 Archive limitations

Using archives to gather data for research has its benefits because it is a record of events that can be analyzed using different methods to make different determinations (Lee 2000). However they can also limit research because of the type of information deposited, how the data is formatted, accessed and searched. All of these factors can limit the creation of a data sample by limiting the information a researcher can truly access, and thus impacting upon validity and bias considerations.

2.4.1 Information deposition

Both Rwanda and Cambodia memorial centres hold thousands of documents pertaining to war crime events. Rwanda has an extensive audio-visual content with emphasis on recording witness's personal accounts, whereas Cambodia contains biographies of those who died during the Khmer Rouge era, Khmer Rouge policy documents, media reports, as well as, witness and perpetrator accounts. Cambodia provides a more objective archive in that it contains governmental communications from the Khmer Rouge era whereby contextual knowledge of events can be independently formed. The Cambodian archive reflects the fact that it is a "documentation centre" and includes all relevant information to conduct a legal investigation of crime. However, Rwanda is a dedicated "memorial centre" and the emphasis of the archive is remembrance.

2.4.2 Potential bias

As a consequence of the differing objectives of both archives there is potential bias in their contents. The Rwandan archive is survivor dominated and accounts of events from perpetrator perspective are lacking which leaves a narrative gap. Bias can also be due to logistics, people living closer to the archive have a better opportunity to provide statements, whereas people in remote locations are less likely to contribute in the same numbers. A regional bias of information is possible and further complicated by the number of survivors of killing events in those locations because in some locations there are no survivors to recall events from their townland or village. Such biases can impact on the representativeness of the sample population. This can create problems for some disciplines, such as psychology where representativeness of a sample is key to generalising results beyond the population sample. However, given the exploratory nature of this research and limitations with data access and storage there is little choice to proceed with the data that is available and acknowledge its limitations.

2.4.3 Inconsistency

Regardless of the objectives both archives contain similar information in the form of witness accounts. However there has been no consistency in the manner in which the information has been collated. This is a widely acknowledged problem with data that has not been captured for research purposed (Alison *et al.* 2001) Neither archive has a set format for gathering information instead they have an ad hoc process of transcribing the unstructured conversational interviews and audio-visual recordings to form the collection. Consequently, there is no consistency in the information provided in each personal account of events. There is variation in the explicit content, some accounts omit details such as the location of the killing event they are recounting, or the method used to kill whilst others provide unequivocal accounts. The required information may exist and recallable, but without a structured approach to gathering testimonies inconsistency is prevalent in both archives content.

Archival inconsistency also exits in the manner in which the search criteria are formed. In

both cases narratives are transcribed and inputted into a database by individuals from different disciplines (legal, anthropological, administrative) and with varying levels of experience, including volunteers. This reflects in differences of key words and terminology used for the search fields. For example, in the Cambodian archive searching the term “beat” within search field results in the retrieval of nine documents from the archive, however, when searching “beaten” 29 documents are identified. No two same documents appear in both searches, yet, when searching “rape” and “raped” documents appear in each search lists. This is a common limitation when searching for information and is not ideal when carrying out a key word search to identify items for study. The problem is simply navigated by using all variations of a word to locate as many documents as possible.

2.4.4 Validity

The use of language presents further considerations whilst collating an archive of witness testimonies. As individuals describe their experiences the words and phrases used may not accurately convey what happened. For example in Rwanda witnesses have referred to seeing victims being ‘hit with machete’ and whilst others use ‘hacked with machete’, although similar terms both are open to interpretation, as hacked can be suggestive of multiple strikes with a machete. This variation may not reflect the true intent of the violent behaviour being described, a consideration when coding violent behaviours for analysis. The ambiguity of descriptions can also be attributed to the transcriber who may not record verbatim, or the variation of terminology when translating narratives into English. It is not possible to eliminate these factors, however, an awareness is required in deciding the most conservative, rigorous and effective methods of data collection and subsequent analysis.

2.4.5 Archive utilization

Regardless of the inherent limitations in the use of any archive according to Canter and Alison (2003) they remain a valuable source of information for criminal investigations. They offer opportunities to examine aspects of human behaviour that can be of significance to an investigation that were not immediately obvious to law enforcement agencies. They are often long term resources that can be revisited and re-examined post event, unlike a crime scene, which once the trace material is gathered cannot be re-examined in its original form.

2.5 Data collection process

The initial phase of data collection required the identification of violent behaviours associated with the ground actions that occurred during war crimes. A literature review was carried out to identify behaviour previously recorded and showed that variables such as rape (Oosterveld 2011) and mass burial (Skinner *et al.* 2002) of victims were common. In the past rape has been successfully used to prosecute perpetrators of war crimes. The systematic implementation of this act of violence formed a significant part in the prosecution of Kunarac during the International Criminal Tribunal of

Yugoslavia (ICTY, Prosecutor v. Kunarac, Case No.IT-96-23-T & 23-I-T). However other forms of violence such as firearms, stabbing and surface disposal have been overlooked as individual means of inferring systematic behaviour. Instead suggestions have been made from co-occurrence of frequent actions. A report summarizing findings from Bosnian mass grave exhumations revealed that there was a consistent collection of actions, such as shoot, restrain and bury, suggestive of a pattern of victim execution (Manning 2000) but there has been no examination of the co-occurrence of all ground actions and what this might say about war crime behaviour. Consequently, this study will review all ground actions that occurred during war crimes, extracted from witness accounts held in the Rwanda and Cambodia archives.

2.5.1 Secondary sources

Much knowledge of war crime violence comes from secondary sources, namely historical and media reports and the accumulative picture of events derived from witness accounts. Although primary resources such as interviews can be considered valuable methods of data collection they have their limitations. Witness can have personal agendas and motives in what they say and issues of bias can limit the validity of the information (Wells and Olson 2003). In this study interviewing witnesses was not possible because of time constraints and the difficulty in obtaining sufficient numbers of participants to have a representative sample. They would require locating large numbers of participants willing and able to communicate their experiences, whilst factoring in the amount of time having passed since the event, and accessing people in regions where infrastructure can be restrictive. Translation and interpretation can also have an impact on interviews, a consideration relevant to the secondary sources recounting witness testimonies. Canter and Alison (2003) have demonstrated the use of secondary sources, such as archives, for use in investigative psychology studies have been beneficial. Using archive material can give a unique perspective to information that was not gathered for a specific research topic and therefore devoid of the biases that can go with it (Wells and Olson 2003).

2.5.2 Witness accounts

Witness accounts from both archives are mostly primary sources, and the quality of content greatly impacts the type of information for analysis. The full content of both archives was unknown because of the inconsistency of recording and transcribing testimonies. Some accounts provide explicit details of the types of violence used, for example “We could see (the *interahamwe*) [militia] kill people with machetes just outside. They did not use guns so as not to alert the gendarmes who had been brought in to guard us.” (Physicians for Human Rights 1994, p. 16), whilst others simply state their family was killed. There was no means of determining the quality of a testimony’s content from the initial search therefore all accounts that could be obtained were manually searched for references to specific ground actions. Only documents containing information which explicitly described the

behaviour that directly contributed to the killing and disposal of victims were used. A witness account needed to contain at least one form of violent behaviour and one form of contextual information such as the date or geographical location in which the event took place. Accounts devoid of at least one form of contextual information were excluded, so as to avoid double recording of the same event by different witnesses.

The risk of double recording of the same event is due to the fact that war crimes are usually the result of an accumulation of criminal events, some of which can occur over a prolonged timeframe. A number of witnesses may recount the same event but from their individual perspective. In this study each individual's account of an event and the actions they witnessed were recorded as a single event, regardless if what they formed part of a mass event. This is because each witness may have witnessed and experienced completely different components of a mass event. Each criminal event described can be classed as a discrete incident if they can be distinguished from each other by factors of time, location, type of perpetrator, or type of victim. From all documents examined in both archives 135 usable accounts were obtained in Rwanda and 159 in Cambodia.

2.6 The data sample

A total of 294 discrete incidents that contributed to war crimes in both locations were identified as having appropriate level of detail to obtain ground action variables suitable for analysis. In Cambodia only testimonies referring to events during the Khmer Rouge era from 1974 to 1979 were used, and in Rwanda only testimonies recounting events between 6th April 1994 and 23rd June 1994 were examined. Testimonies were extracted from a variety of sources in each archive, mainly from witness narratives documents, and audio-visual recording, but also including excerpts from media reports, and legal transcripts from related international criminal tribunals.

2.6.1 Data extraction

Content analysis contributes to the ability to make "inferences based on quantified analysis of recurring, easily identifiable aspects of text content" (White and Marsh 2006 p.23). Recurring words and phrases that described the physical actions used to kill and dispose of victims during each of the 294 killing events formed a content dictionary. This qualitative information is then converted to units for analysis which can be problematic given the inherent limitations of qualitative data. However when forming a content dictionary that accounts for the limitations of qualitative data and includes categorical variables that are consistently and accurately recorded, then analysis can be sufficiently reliable and valid for analysis (Canter and Alison 2003). An inductive approach of data extraction was used due to the lack of previous knowledge regarding the ground actions used during war crimes. This "...is to allow research findings to emerge from the frequent, dominant, or significant themes inherent in raw data, without the restraints imposed by structured methodologies" (Thomas 2006 p.238). Each

new keyword identified when reading each witness testimony was recorded and built the content dictionary.

2.6.2 Variables and measures

Not all actions associated with war crimes were examined during this study because of inconsistency and inaccuracy of reporting. As part of the inductive process a victim type variable was included with a view to see if specific ground actions only occur with a particular victim group. Victim type was viewed as an important variable because systematic targeting of religious or ethnic groups determines the war crime committed (Staub 2000). However there was no consistency in the reporting of victim type to justify its inclusion because the criterion for group affinity is subjective (Komar and Lathrop 2008), therefore only killing and disposal behaviours formed the foundation of analysis. To quantify all actions occurring in a single killing event the categorical information had to be transformed and account for multiple behaviours that can occur in a discrete killing event. Variables are required to be mutually exclusive so that there are no problems with internal validity. This was accounted for in the development of the content dictionary (Appendix 1) so that hierarchical or overlapping variables might validly be considered mutually exclusive. This required a dichotomous system of recording the presence or absences of an action during each killing event. A binary notation of 1 for "Yes" the behaviour is present and 0 for "No" the behaviour cannot be recorded as being present.

Additional information such as the unique archive reference number, format of the data that is, whether it was a media report, personal testimony or published book was recorded. Names of individuals' providing the information was also recorded for the purpose of cross referencing and preventing double recording of the same event across different formats, however the names are not for identification and are anonymised for publication.

2.6.3 Killing variables

There is no catalogue of ground actions that accumulate to then be regarded as a war crime. Rape is the only singular action recognized as an act of genocide because of its systematic use against the targeted population (Oostervald 2011). Narrative evidence that rape was systematic could be attributed to the non-lethal nature of the actions resulting in survivors being able to provide testimonies. Therefore any singular actions reported by witnesses of killing events may indicate patterns of behaviour previously over looked, particularly if some actions only occur in conjunction with one other. The evidential significance of all killing behaviours has not been explored to determine their systematic use.

From the 294 cases recorded in Cambodia and Rwanda a total of 44 ground actions (killing, interaction and disposal) were detected across both studies. Each location had 11 killing methods in common (Table 2.1), whilst Cambodia has 12 (Table 2.2) and Rwanda has 6 unique killing methods

(Table 2.3). The actions are familiar terms that can be defined in dictionaries, and considered self explanatory, for example firearms, beat, and strangle however evidential connotations can alter depending on context. For example *beat* in the Oxford English dictionary is defined as "strike repeatedly and violently so as to hurt or injure, typically with an implement such as a club or whip" (Oxford Dictionaries online [Accessed 16 November 2014]). However this definition may not reflect what the witness saw or experienced during a killing event, specifically the "repeatedly" element of the definition. In Cambodian literature the term "to smash", is used to describe a form of execution with a strike to the back of a victim's head with a blunt instrument (Sliwinski 1995), but no standardized definition exists. According to Chandler (1999b), who published accounts from executioners operating in Choeung Ek prison Phnom Penh, when discussing "smashing" Mr. Huy states, "They [victims] were ordered to kneel down at the edge of the hole. Their hands were tied behind them. They were beaten on the neck with an iron ox-cart axle, sometimes with one blow, sometimes with two...." This reference from an individual who carried out the killing behaviour implies that the term "smash" refers to a single blow, rather than the "repeated" element of the "beat" definition, yet "beaten" is used in the description. The problem is that the terms "smash" and "beat" have been used interchangeably in witness accounts, so, to ensure consistent interpretation of variables, and form strict criteria for a variables use throughout the study a coding dictionary was formed (See Appendix 1). The definitions of the killing behaviours are based on a combination of dictionaries and an understanding of the context within which the behaviour is carried out, formed through the inductive analysis of the witness testimonies.

Killing Actions	
Beat	Dismember
Firearm	Drown
Explosive/Blast	Throat Cut
Stab	Bury Alive
Torture	Burn Alive
Rape/Assault	

Table 2.1 Shared killing actions

Killing Actions	
Liver Removal	Brain Removal
Head Trauma	Poison
Hit against tree	Gas
Strangle	Suffocate
Behead	Electrocute
Fed to animals	Strung Up

Table 2.2 Cambodia killing actions

Killing Actions	
Machete	Penis Removal
Masus	Foetus Removal
Stone	Bow

Table 2.3 Rwanda killing actions

The evidential significance of the ground action also contributed to the scope of variables to be included in this study because their occurrence can explicitly infer a war crime has occurred. For example during the General Krstić trial (ICTY) the defence questioned the cause and nature of deaths, largely attributed to firearms. They questioned whether deaths could be attributed to combat or suicide, rather than a war crime. The expert witness responded with the fact that they had investigated many suicides but never seen an individual with their hands tied behind their back shoot themselves multiple times (Kimmerele and Baraybar 2008). An empirical model, based on the co-occurrence of actions adds to the evidential value of examining ground actions in conjunction with other forms of behaviour especially if combinations can rule out alternative theories for cause and manner of death.

In addition to ground actions shared in both locations there are behaviours unique to each case study (See Tables 2.2 and 2.3). Unique actions were collected with a view to examining if there is evidential significance in their uniqueness, for offender differentiation or case linkage (Grubin *et al.* 2001). For example liver removal, unique to Cambodia, was recorded because "...the liver according to Khmer and Chinese medical lore is regarded as a locus and source of personal strength. Hinton in an article examining the phenomenon of the Khmer Rouge liver eating, suggests that the practice serves both to deprive the victim of vitality and empower the consumer with daring." (Hinton 1998 p28). Outside the context of war crime this action could be viewed as sadistic and perhaps attributable to an individual who subscribes to expressive behaviour. During war crime it could be viewed as evidence of torture, which is one of the few actions specifically reference in the definitions of war crimes (UNGA (1998). Rome Statute. UN Document A/CONF.183/9 Article 7) and therefore of particular evidential importance.

2.6.4 Victim interaction

The recording of victim interaction behaviours can provide context and counter suggestions that victim deaths are attributable to suicide or combat. Interaction variables are actions which impact on the manner of death and disposal, and can be of evidential significance as standalone behaviours and when used in conjunction with ground actions (See Table 2.4). For example, "clothing removal" was an important factor in the prosecution of war crimes in Bosnia, because clothing can be used as a form of national, religious and racial identity (Komar and Lathrop 2008), without identification of the victims it is difficult to prosecute (Komar 2003). The use of victim restraint in conjunction with killing actions would rule out combat and suicide as causes of death.

Interaction Behaviours	
Restrain	Blindfold
Music	Warning
Clothing Removal	Artefact Removal / Loot
Bulldozer	

Table 2.4 Victim interaction behaviours

2.6.5 Disposal variables

Disposal actions refer to how the victims are treated after death including the conduct offenders uses to conceal evidence of the crime. Treatment of the dead can also imply systematic conduct of perpetrators and contribute to evidence that a war crime has been committed, for example, burial of victims in mass graves that have been prepared using machinery can be indicative of planning and coordination, subsequently intent of superior perpetrators can be inferred (Hochrein 2002). Conversely leaving victims on the surface could imply a lack of regard for the consequences of the crime, or offenders may not view their actions as a criminal offence, especially if they are following orders from military commanders. Furthermore, the lack of effort to conceal the acts of killing could be indicative of lack of preparation which could be inferred if the action occurs in conjunction with expressive forms of violence.

A total of 9 disposal behaviours were identified from the 294 cases, 6 are common in both locations (Table 2.5), but 3 are unique to Cambodia (Table 2.6). Similar to killing behaviour variables, methods used to dispose of victims after death can be somewhat self explanatory, however in the context of war crime the exact meaning of a term can differ. In this study burial is used to refer to the concealing of bodies by covering them from view, regardless of the number of people or the medium used to cover the bodies, for example, soil, rubble or sand. This simplistic view had to be adopted because of the forensic complexity associated with mass graves. Mass graves form a large part of the physical evidence used to prosecute perpetrators of war crimes (Klinkner 2009). The manner in which they are dug, how the victims are interned and covered can be indicative of preparation, co-ordination and concealment (Manning 2000).

Disposal Behaviours
Burial (Grave)
Surface
Cremate
Water
Drain/Sewer
Cave

Table 2.5 Shared disposal behaviours

Disposal Behaviours
Well
Strung up
Crater

Table 2.6 Cambodian disposal behaviours

2.6.6 Situational variables

To prevent double recording the date of the event, the geographical location and the type of perpetrator present for each discrete killing event was documented. These variables were also used as factors in which to assess the variance of ground actions subsequent to findings by Verwimp (2006). The determination that being killed by a firearm can be dependent on killing location and time period and this could have implications for this study. For example, earlier killing events around Rwanda's administrative centre may be more likely to use a firearm. Establishing that some ground actions are more likely to occur in a specific location can assist the ICC investigations team to target their evidence recovery and forming a more comprehensive picture of events to be used against indicted perpetrators. Furthermore this information can help with the understanding of war crime and how it can vary geographically and across time.

Similarly to behaviour variables the type of perpetrator present during the killing event was recorded dichotomously because there are cases were more than one type of perpetrator can be present during a discrete killing even. This will be drawn upon in subsequent chapters to explore differences in killing events where different types of perpetrator are present. The time and geographical location of the killing event were recorded categorically.

2.7 Analytical methods

2.7.1 Descriptive analysis

Descriptive analysis was used to establish the nature of all actions in each location. It determined the frequency and prevalence of the 44 ground actions and situation variables recorded across both case studies. Subsequently similarities and difference between the two locations will be discussed. Frequencies of the behaviours were calculated using SPSS v.17 from the database in which the presence or absence of behaviours was recorded (See Chapter 3). Descriptive analysis helps to understand prevalence of behaviours and nature of the sample, as well as checking the quality of the data sample prior to performing the multivariate procedures that explain the war crime actions.

2.7.2 Cluster analysis

Cluster Analysis (CA) was performed to determine if all reported ground actions could be classified into groups whereby the variables are similar, yet the cluster are distinct (Tan *et al.* 2004) (See Chapter 5 and 6). In doing so it enables group segmentation, pattern recognition, trend analysis

and classification of a large data sample (Boryczka 2009). This will give an account of what ground actions co-occur and their classification into groups can provide a descriptive interpretation of the sample. Knowledge of which actions co-occur can assist the ICC in demonstrating systematic use of key ground actions and use the information to guide forensic examination of the actions and questioning of offenders. CA works in two ways, firstly, to confirm existing research taxonomies and typologies, and establish if variables from a new data sample corroborate the findings of a published model. This has been successfully demonstrated in criminal behaviour models such rape (Sewall *et al*. 2013) and murder (Taylor *et al*. 2012). Secondly, it allows for exploratory analysis of variables with developing a model in mind (Burns and Burns 2008), which is of benefit here given no prior study has used cluster analysis has been identified to date.

The exploratory nature of this research necessitated the use of the hierarchical method of classification to summarize variables because no assumptions about the data are required to gain meaningful results (Tan *et al.* 2004). The hierarchical method initially treats each individual variable as a distinct cluster and over a series of steps they are agglomerated into successfully larger clusters until all are classified into one cluster encompassing all actions (Eshghi *et al.* 2011), in doing so variables of similar taxonomy are clustered together in a number of groups. Forming clusters in a progressive manner does not result in an exact solution as to which variables define a cluster, nor the exact number of clusters formed, it merely acts as a guideline (Bartholomew *et al*. 2008). Instead the final decision was at the discretion of the interpreter and the knowledge gained through the collection process. The decision making process was not completely ad hoc as the methods have a series of measures in place so that informed choices were made, based on nature of the data and the aim of the research (Tan *et al.* 2004). For example weighted average linkage method of distance measure was used because it measures the average distance between all variables in one cluster with all the variables in a neighbouring cluster, thus avoiding the pull of variables with extreme high or low values (Bartholomew *et al*. 2008). Avoiding variables with extreme frequencies dominating a cluster ensures that any clusters formed were interpreted on their subject content. In conjunction with distance measures the similarity coefficient of the variables were also chosen based on the nature of data. The Jaccard similarity coefficient was chosen because of the binary recording of variables. Binary recording is limited in that it records the behaviour as being present or absent, without taking into account that the behaviour may have occurred but it simply may not be reported in the literature, and Jaccard's coefficient accommodates for this by not taking into account mutual non-occurrence.

CA was used because the method has measures in place to provide an objective means of partitioning actions and enables a structured approach in describing the similarities and differences of the unexplored data. The ICC would benefit from the method's validity because of the objective and transparent partitioning of variables which removes some subjectivity of the decision making, which could be exploited by the defence. Latent class can also classify variables and may be deemed a superior means of analysis due to its statistical decision making of clusters, making the method less

arbitrary (Vermunt and Magidson 2002). Latent class tends to be used for polytomous variables (Tan *et al*. 2004) however the variables in this study are recorded as dichotomies. CA also offers a greater flexibility when it comes to determining the classification of actions into groups. This is preferred in this study because it allows knowledge gained from the literature to inform the decision making of the most appropriate cluster solution for the sample, which is important given the lack of empirical studies of war crime behaviour to draw upon. It is the identifying and interpreting of the behaviour clusters that form the basis of a war crime behaviour model. Whilst beneficial, the method does not fully exploit the data sample and account for the qualitative information attached to the ground actions. It is the combination of qualitative and quantitative analysis that adds to interpretation reliability and validity (Canter and Alison 2003) therefore contribute to the quality when describing the sample.

2.7.3 Smallest Space Analysis

Similar to CA, Smallest Space Analysis was used as a data reduction procedure (SSA-1, Lingoes 1973) which enables inferences to be made about the sample. Firstly, Smallest Space Analysis was used as a means of method triangulation, given the novelty of the study and the sample corroboration of findings from both methods makes for more robust conclusions and theory development. Secondly, SSA was used to test whether the groups of ground actions formed during CA can be differentiated into behaviour themes, similar to the *Conservative, Adaptive, Integrative*, and *Expressive* themes attributed to perpetrators of war crimes in Bosnia (Hollows and Fritzon 2012). SSA is carried out on the Hebrew University Data Analysis Package (HUDAP, v. 8) this Multidimensional Scaling (MDS) programme was developed from Facet Theory and graphically represents the relationships of variables with every other variable (Canter 1989) in the sample in geometrical space (Shye *et al.* 1994) (See Chapters 5 and 6). Plotting of variable relationships in the multi-dimensional space requires calculating the correlations coefficients between variables in the data matrix and plotting the values in a rank order. The variables which are closer together in the space share similarities in some underlying empirical structure. The space can then be partitioned into regions that are said to relate to various psychological themes (Borg and Lingoes 1987) and therefore both qualitative and quantitative differentiations can be made in the same analysis.

Although themes can be attached to CA groups the method does not fully exploit the qualitative interpretation of classification. SSA presents an opportunity to explore the influence of high and low frequency behaviours as a sub-set of distinct but related forms of offending. High frequency actions, such as beat, may be central to a range of killing events, which in cluster analysis would be forced into one cluster, but in SSA it is possible to model its relationship with all variables within a visual space. SSA arguably then, lends itself better to theorising whilst cluster analysis lends itself better to practical legal decision making. The novel nature of this study required the rigidity of CA to gauge the patterns of behaviour and obtain a conservative benchmark upon which to build

theoretical arguments. SSA is a flexible and non-metric method which requires meeting fewer data assumptions to produce meaningful results. Therefore it was used to triangulate the CA findings whilst exploiting the qualitative dimension of the method and progress the interpretation and theorising of war crime behaviour.

2.7.4 Multivariate Analysis of Variance

Having identified the collections of variables Multivariate Analysis of Variance (MANOVA) was carried out as it can "tell us how multiple independent variables interact with each other and what effects these interactions have on the dependent variable" (Field 2005 p. 309) (See Chapter 7). Verwimp (2006) suggested that location, victim age and how soon after the start of the genocide had an impact on whether a victim was likely to be killed by a firearm rather than machete in Rwanda. In this study MANOVA examined the effect of time, location and perpetrator type had on the ground action themes proposed by CA and SSA, because it enables the exploration of all variables simultaneously (Rumsey 2007), consequently all relationship between and within the variable factors will be examined. Being able to establish that time, location and perpetrator can have an impact on ground actions is valuable to the ICC. The knowledge of the material element of the crime can aid investigation teams focus the search for evidence specific actions in a particular location at a particular time, or tailor questioning of an offender with a view to infer their intent in participating in a war crime.

Chapter 3

The Nature of War Crimes in Cambodia and Rwanda

This descriptive chapter will establish the nature of the material elements which amass and result in war crimes. It will provide a descriptive summary of all ground actions reported by individuals who were witness to cases in Cambodia and Rwanda. It will cover all 44 modes of killing, disposal and victim interaction behaviours identified through content analysis from the 294 killing event cases studied across both locations. The killing events will be examined to determine the types of perpetrator present during each case as well as the date and geographical location of the event. All factors will be described through the type of variables, their frequency and saliency, and what observations can be made in conceptualizing the crime.

3.1 Introduction

To date there have been no studies that empirically examine all the ground actions carried out during war crimes, instead research focus is placed on a select number of actions that demonstrate planning, co-ordination and instigation by superior offenders. There has been little research into how planning and organisation actually translates into the ground actions other than referencing the more frequent and widely reported forms of killing. Most research pertaining to inferences from crime scene evidence comes from domestic crimes such as, murder (Canter *et al.* 2004), rape (Mokros and Alison 2000) and robbery (Porter and Alison 2006). All of which examine the range and frequency of actions to make informed decision about the nature of crimes and the different ways in which they are carried out. Their rationales for obtaining this level of information is to narrow the search for offenders, make evidential inferences during legal process as well as identifying methods of crime prevention (Verfailllie and Vander Beken 2008). All rationales fit with the ICC's mandate yet the methods of examining crime scene actions have not been utilized.

3.1.1 War crime narrative

In Cambodia and Rwanda knowledge of ground actions tend to be general observations derived from narrative accounts, that tend to generalize the types and patterns of violence displayed, for example "my neighbour was killed and thrown in a pit", or, "my brother was taken away and shot". Historical accounts provide the timeline of events and are interspersed with witness experiences which support the general pattern of violence. This approach enables some knowledge of the material elements of the crime to emerge. Studies by Chandler (1986, 1999a, 1999b) and Kiernan (2004, 2008), prolific documenters of events in Cambodia between 1975 and 1979, referenced accounts of the Khmer Rouge subjecting victims to beatings and torture before being deposited in mass graves, but no other ground actions have been afforded much attention. Knowledge of material elements of crime in Rwanda follows the same formula but the focus is on machetes and leaving bodies on the

ground where they were killed (Melvern 2004). Whilst these ground actions are commonly associated with each location their prevalence can only be fully acknowledge by examining all material elements. Disregarding other ground actions is to assume that all offenders participate in the crime in a prescribed manner as dictated by the planning and co-ordination of the superior perpetrator. However 44 different ground actions have been identified from this sample of 294 cases which suggests that not all offenders participate in the same way. Inferring that different forms offending can take place could assist the ICC distinguish between offenders types that is, those who directly implement the orders from others who go above and beyond what they were instructed to do. Arguably, this information would provide an evidential link between the intent of the superior perpetrator with the material elements of the crime.

A study of ground actions in Srebrenica, Bosnia determined that some behaviour can portray the planning and co-ordination of war crimes. Manning (2000) produced a report for the ICTY that summarized findings from grave exhumations and determined that material elements of the crime were systematic. Synthesizing findings from forensic archaeology and anthropology reports demonstrated that there was a common sequence of ground actions which culminated into systematic execution. This descriptive evidence of male victim selection, restraint, killed with firearms and disposed of in mass graves was used to infer the intent of General Krstic (Bosnian Serb Army), amongst others, of planning and instigating war crimes. The frequency and widespread use of this combination of behaviours proved evidentially significant in that the forensic summary directly contributed towards establishing culpability for the crimes.

Sites selected for exhumation tend to be at the discretion of the Office of the Prosecutor (Klinkner 2009) as they wish to present the best evidence to the Court. However this can detract from reliability of evidence because of the bias in site selection can limit the types of ground actions discovered. The shortcomings of limiting the evidence to frequent behaviour as opposed to all material elements can be demonstrated in Verwimp's (2006) acknowledgment that the types of killing actions used can be dependent on time and location. In one Rwandan prefecture it was determined that being killed with a firearm was more likely in the north of the prefecture during the early stages of the crime (Verwimp 2006), which defies the assumption that machetes are the key ground action. Although limited to one prefecture it is possible that empirical variations of ground actions could be exhibited across the whole country. Verpoorten (2010) determined that different regions in Rwanda were affected by violence in different ways depending on the social and demographic development of the region, as well as the historical relationships of Hutu and Tutsi population. These findings show that the material elements of war crimes have not been examined to their full potential, even at a descriptive level. Establishing the nature of all ground actions provides opportunities to conceptualize war crimes in enough detail to form more rigid connections between the superior offender and the ground actions. This knowledge can also be used to determine if all ground actions are the result of superior perpetrators, of perhaps attributable to offenders overlooked by the ICC.

3.2 Rationale

The nature of war crime ground actions is needed for the same principles as domestic crimes, that is, to provide intelligence that can assist the Office of the Prosecution to effectively investigate crimes, indict the appropriate offender and provide suitable evidence for conviction. Consequently, this descriptive chapter will examine all ground actions attributable to war crimes in Cambodia and Rwanda. Emphasis will be placed on crime scene actions likely to leave recoverable trace evidence, in conjunction with victim interaction variables to give a comprehensive view of the offences that accumulate to form a war crime.

3.3 Method

3.3.1 Sample

All 44 ground actions to be examined in this chapter were derived from 294 cases of violence recorded in the Cambodian and Rwandan archives. In Cambodia all actions were identified from incidences occurring between the years 1974 and 1979, which covers the full scope of the Khmer Rouge regime. In Rwanda all identified actions were taken from reported incidence of violence between 6th April 1994 and 23rd June 1994, this covers the timeframe from when President Habyarimana's plane crashed to the Operation Turquoise take over. The situational factors recorded to determine if they affect the use of ground actions are also examined in this chapter. Perpetrator type, date and the geographical location of each case in both case studies were recorded as categorical variables and frequency of each variable examined.

3.3.2 Procedure

As described in Chapter 2, the inductive method of content analysis was used to identify all ground actions reported by witnesses. The occurrence of each action and situational variables across the 159 cases in Cambodia and 135 cases in Rwanda was counted subsequent to dichotomous recording for presence or absences to establish variable frequency. The variables and their associated frequency will establish the nature of ground actions and form the basis for multivariate analysis. This will determine if there is variation in killing methods which can be used as an empirical model and provide an evidential basis for making inferences.

3.4 Results

3.4.1 Cambodian killing actions

Table 3.1 shows the frequencies of the 23 killing actions recorded across 159 cases of violence in Cambodia and indicates beat (26%), head trauma (18%) and torture (13%) are the most frequent killing actions, which corroborates what is documented in literature. Often the literature makes a specific reference to the act of being hit on the head, although it could be considered part of beating it was given a distinct category here. This is because of the assumption that large numbers of

people were killed with a single blow to the head with a blunt instrument (bamboo, ox-cart axles) and pushed into a mass grave (Chandler 1999b, Ta'ala *et al.* 2006). This particular ground action has been examined as part of forensic examinations of human remains and an anthropological study of 85 skulls from Choeng Ek (Ta'ala *et al.* 2006) substantiated this assumption, but this conclusion was made on the trauma pattern of 10 skulls from that sample. This small sample is not adequate to make inferences about ground actions across Cambodia especially given the Verwimp's (2006) study that indicated that some ground actions are dependent on location. Similar conclusions could be drawn from the use of firearms (14%) which is amongst the more frequent actions here but receives much less attention in literature. However, (Pollanen 2002, p.2) forensic survey of human remains from three memorial sites in Cambodia reported that "A significant minority of the human skeletal remains revealed evidence of trauma in the form of sharp force chopping injuries of the lower extremities and gunshot wounds of the head". The most frequent and widespread actions can be indicative of sanctioned forms of killing but with a 'significant minority' of sharp force and firearms it is unclear if they too form part of the Khmer Rouge suite of actions, or perhaps actions attributable a deviant group. They may also reflect what resources were available in certain areas or at certain times, so contextual understanding, as previously argued, is important to take into account also. The detail of ground actions from the forensic examinations test the narrative assumptions and reveal that there are a range of actions taking place in Cambodia, therefore making inferences from narrative information alone does not provide a full picture of events. This leaves opportunities for counter theories of events to be proposed, such as, victims being killed through combat rather than systematic killing.

There are a number of very low frequency actions such as brain removal (1%), gas (1%) and poison (1%), they could be the deviant actions expressed by offenders operating outside the normative range of behaviours performed by the majority of perpetrators. Although brain removal would be an unusual behaviour in most criminal contexts, gas and poison were salient forms of killing during war crimes in Germany (Russell and Gregory 2005) and Iraq (Hiltermann 2007), yet had very little impact on the large scale deaths in Cambodia. This shows that a more comprehensive survey of the material elements of war crime is required for each conflict, because of the potential evidential inferences that could be made about differing forms of violence.

Killing Actions	Frequency		Killing Actions	Frequency	
Beat	41	26%	Dismember	6	4%
Head Trauma	28	18%	Strangle	5	3%
Firearm	22	14%	Drown	5	3%
Torture	21	13%	Behead	5	3%
Liver Removal	12	8%	Explosive	4	3%
Strung Up	11	7%	Fed to Animals	3	2%
Stab	11	7%	Electrocute	2	1%
Bury Alive	10	6%	Poison	1	<1%
Hit against Tree	8	5%	Gas	1	<1%
Sex(Assault/Rape)	8	5%	Suffocate	1	<1%
Throat Cut	8	5%	Brain Removal	1	<1%
Burn Alive	7	4%			

Table 3.1 Killing action frequency across 159 Cambodian cases

3.4.1.1 Rwandan killing actions

A total of 17 killing actions were recorded from 135 cases of violence during war crimes between April and July 1994 in Rwanda. Table 3.2 shows that the most frequent form of killing is being struck with a machete which occurred in 58% of the 135 cases, whereas deaths associated with firearms occurred in 44% of cases and explosives were used in almost a quarter of events. Similarly to Cambodia the frequently reported actions corroborate what is reported in literature. The use of the machete in Rwanda was expected because of its predominance in historical and social literature relating to Rwanda and Africa as a whole (Des Forges 1999) as it was a multifunctional tool central to the agriculturally dependent economy. All members of the Rwandan population would have had access to a machete, which were then exploited as a weapon (Verwimp 2006) and frequency could also be attributed to the Rwandan government issuing machetes, under the guise of self defence prior to the genocidal period (Human Rights Watch, 1994). The ease of access to weaponry can go hand-in-hand with frequency of the killing mode especially in Rwanda where it has been reported that the majority of the civilian population partook in the crimes (Des Forges 1999), all of which would have had access to a machete. However access to firearms was more controlled because of cost, yet gunshot accounted for the second most frequent form of killing occurring in 44% of killing events. Human Rights Watch's 1994 report indicated that sections of the civilian population were issued with firearms, specifically administrative members of community groups and quoted Colonel Nsabimana saying that "at least one person per ten households should be armed with a firearm" (Human Rights Watch 1994, p. 27). The person issued with the firearm would have held an authoritative role within the community and this connection presents the ICC with an evidential opportunity to differentiate types of perpetrators based on the mode of killing. Des Forges (1999) also pointed out that councillors and trained militia were given firearms, and went on to suggest that it was government policy to militarize the rural population. The militarizing of the Rwandan population could be inferred from the frequency of killings attributable to explosives. Bomb blast occurred in 24% of all killing events, a statistic that would not be out of place if the killings could be attributed to the military. This suggests

that particular ground actions could be attributed to different offenders, if this is the case it may be possible to identify subordinates whose actions directly reflect the intent of superior perpetrators and subordinates who overkill, or partake in the crime for personal gain. Verwimp's 2006 study further highlights the differential use of machetes and firearms, he found that the "probability of being killed with a firearm depended on the location where the victim was killed.....location....and time after the onset of the genocide" (Verwimp 2006 p.5). Taking into account these factors and their potential effect on mode of killing can assist the Courts when trying to demonstrate widespread use, planning of actions and offender culpability.

Low frequency ground actions include removal of foetus from a pregnant woman (3%), removal of penis (1%) and throat cut (<1%). Foetus removal and penis removal are notable behaviours because of their rarity as a means of murder or killing on the whole, such behaviour is usually attributed to sadistic or vengeful killing (Holmes and Holmes 1998). Similarly to brain removal in Cambodia the actions may have limited connections to the intent during war crimes, but perhaps associated to a subgroup of perpetrators not operating within the normative violence descending from superior perpetrator commands. In the context of domestic crimes sadistic and vengeful acts are said to stem from expressive offenders and not indicative of planning an offence (Salfati and Canter 1999). These inferences are based on an actions co-occurrence with a range of actions during the crime and, that is interpretation is dependent on the context of all other actions (Canter and Heritage 1990).

Contrary to the crime literature, low frequency is not necessarily indicative of sadistic or expressive offenders in war crimes. In Rwanda foetus removal can be linked to sexual violence and rape both of which can be classed as a war crime subsequent to ICTY and ITCR rulings. Foetus removal prevents repopulation of the targeted Tutsi community, particularly when women were then subsequently raped to carry Hutu children. Examination of frequency does not show how, or if, the two ground actions co-occur, but if they do it could be inferred that foetus removal could form part of the widespread, systematic actions attributed to the planning and co-ordination of war crimes in Rwanda. Despite references to its widespread use rape was only reported in 7% of the 135 cases, surprising given its extensive reporting in literature (Askin 1997). Low reporting here could be attributed to low lethality rates of rape and rape was only recorded as part of an event that resulted in death. Consequently, exploring the range of killing methods and the co-occurrence of ground actions rather than making inference from the most frequent enables more considered explanations of events.

Killing Action	Frequency	%	Killing Action	Frequency	%
Machete	78	58	Torture	10	7
Firearm	60	44	Dismember	10	7
Explosive	32	24	Stone	9	7
Beat	30	22	Bow and Arrow	5	4
Stab	22	16	Drown	5	4
Masus	17	13	Foetus Removal	4	3
Bury Alive	13	10	Penis Removal	1	<1
Burn Alive	12	9	Throat Cut	1	<1
Rape/Assault	10	7			

Table 3.2 Killing action frequency across 135 Rwandan cases

3.4.2 Cambodian disposal actions

Table 3.3 shows that grave burial is the most frequent method of disposal (47%) followed by wells 10% and water 9%. Disposal of victims in a pit and then covering it is common because it hides the body and therefore the evidence, a practice common in crimes such as murder (Beauregard and Martineau 2013). This high rate corresponds to the historical connotations between *Killing fields* and events in Cambodia. It is estimated that there are 300 mass graves and more than 19,000 burial pits throughout Cambodia (Tyner 2014). The widespread use of grave disposal is physically evidenced throughout the Cambodian landscape as well as narrative information. To perform this action and conceal large numbers of victims requires resources, manpower and organization. Subsequently, this material element of the crime can be another action linked to the superior offender. However it is not apparent from frequency analysis if this form of disposal is performed in conjunction with the widespread modes of killing to suggest a series of actions that demonstrate a pattern similar to the execution pattern of behaviours in Srebrenica (Manning 2000).

Similarly to low frequency modes of killing, atypical disposal actions could indicate subordinates operating outside the orders of the superior perpetrator and using the crime for personal gain or to fulfil violent urges. Inferences of this nature require a number of atypical actions to co-occur otherwise it is simply that in some killing events those implementing orders are using convenient opportunities to save time and effort. Well (10%), surface (7%) and cave (<1%) are all suggestive of making use of the naturally occurring features in the landscape for convenience.

Disposal Actions	Frequency	
Grave	75	47%
Well	16	10%
Water	14	9%
Surface	9	7%
Cremate	7	4%
Drain/Sewer	2	1%
Suspended	2	<1%
Crater	1	<1%
Cave	1	<1%

Table 3.3 Disposal action frequency across 159 Cambodian cases

3.4.2.1 Rwandan disposal actions

In Rwanda grave burial is also the most frequent form of disposal (31%) (Table 3.4) and can be considered an organised action during war crimes given its prevalence in Cambodia (47%) as well as Bosnia (Manning 2000), but surface disposal (19%) in Rwanda is markedly higher than that of Cambodia (7%). Burial would be high because it conceals evidence whereas surface disposal can be indicative of a lack of concern for the repercussions for actions, or, perhaps the hastiness of killing. In some incidences it could be argued that leaving bodies on the surface can be an act of intimidation to the targeted population. Making such inferences is limited because at present they are formed from single actions, but could be substantiated if they occur with similar types of actions. For example surface disposal and penis removal together would convey a certain image beyond the principle function of a war crime, that is, to destroy a population group. The effort to perform a task can impact on the use and frequency of ground actions, as well as establishing the intent of the offender. Weapons are proficient in achieving lethal force and fulfil the war crimes objective, yet there are instances of inefficiency, such as using multiple modes of killing in a single event. Using beat, rape and stab to kill an individual requires greater exertion, going beyond what is necessary to carry out the task of killing victims, this 'overkill' may be representative of offenders not implementing the organised and systematic modes of killing set out by the superior perpetrator. Subsequently, if not carrying out orders, it could be suggested that offenders who go beyond the necessary means to kill cannot use the "following orders" defence to negate their criminal responsibility. This differentiation can allow the ICC to target key perpetrators more efficiently and refer those using the cover of war crimes to appropriate domestic courts.

The higher frequency of surface disposal in Rwanda can also be used to support the suggestion that the government backed the widespread killing because not concealing actions implies offenders are impervious to the possibility of consequences of their actions. However, this theory can only be inferred from frequency data and inferences are better supported if all other actions are considered.

Disposal Actions	**Frequency**	**%**
Grave	42	31
Surface	26	19
Cremate	6	4
Water	7	5
Drain	8	6
Cave	1	<1

Table 3.4 Disposal action frequency across 135 Rwandan cases

3.4.3 Cambodian victim interaction behaviours

In addition to killing and disposal actions war crimes can be defined by the manner in which perpetrators interact with victims. It is the restraining of a victim whilst killing that can differentiate between deaths being attributable to combat or execution (Kimmerele and Baraybar 2008). Actions viewed as contributory to the interpretation of the material element of war crime were recorded in 64% of 159 cases in Cambodia. Restraining occurred in 33% of cases and was the most common form of controlling victims. It is most powerful evidentially when examined in conjunction with the mode of killing and disposal used against victims as demonstrated in Srebrenica (Manning 2000). In Bosnia restraint occurred as part of a series of actions which together demonstrated systematic execution. It is not clear from frequency analysis alone if the same conclusions can be applied to Cambodia, it is possible that the use of restraint co-occurs with less prominent actions, and be representative of offenders different to those implementing the commands of superiors. The same can be said for music (11%) used to cover the noise of those being killed. Its evidential role as a ground action may only come to light in when examined in the context of all other actions.

Victim Interaction	**Frequency**	
Restrain	52	33%
Music	17	11%
Clothes Removal	14	9%
Bulldozer	9	7%
Blindfold	4	3%
Artefact Removal	2	1%

Table 3.5 Victim interaction variable frequency across 159 Cambodian cases

3.4.3.1 Rwandan victim interaction behaviours

The victim interactions in Rwanda contrast with the findings of Cambodia, out of the 50% of cases exhibiting interactions factors only 6% involve restraining victims (Table 3.6). This could be due to the scale of killing in Rwanda whereby large groups were herded to collective locations such as churches and schools then killed en masse. Unwittingly victims went to such locations having been instructed they were places of sanctuary (African Rights 1995), their willingness would have meant that restraining was not required. In which case restraining of victims in Rwanda may not have the same evidential significance as it does in Bosnia, and perhaps Cambodia. Looting or object removal from victims (20%) and clothing removal (16%) are the most common victim interactions. Carrying out these actions whilst killing implies that some offenders are using the cover of mass killing for personal gain, or simply as an opportunistic by product of sanctioned violence and so again it is important to consider the co-occurrence of actions. Actions such as looting can blur the line between whether these offender actions form part of the war crime as a whole, or to a sub group of offenders with their own agenda and objective. In which case the ICC may be able to differentiate these types of offenders and their actions from subordinates carrying out the orders of the superior offender, in doing

so investigators can narrow the range of ground actions implemented through those planning the crime.

Furthermore, object and clothes removal may be a reflection of the development status of Rwanda and the economic hardship of much of the population, but clothing removal can have an added level of evidential significance. During war crimes in Bosnia clothes were removed to obscure the identity of victims and used to suggest that victims are combatants and not the targeted group (Skinner *et al.* 2002). Whether combat can be used as a cover for the true reason for victim deaths is dependent on what actions occurring in conjunction with others. Again, the occurrence of these actions in conjunction with modes of killing and disposal could be used to infer the intent of the perpetrator, however implying the evidential importance from frequency of actions is limited. Consequently, an inferential method of analysing the material elements of the crimes is required, and is dealt with in subsequent chapters.

Victim Interaction	**Frequency**	**%**
Artefact Remove/Loot	27	20
Clothes Removal	22	16
Restrain	8	6
Warning	7	5
Bulldozer	4	3

Table 3.6 Victim interaction variable frequency across 135 Rwanda cases

3.5 Situational factors

The situational variables were gathered to establish the contexts in which ground actions are performed. The perpetrator type (Table 3.7), the time period in which the individual event took place (Tables 3.8 and 3.9) and the geographical location (Table 3.10) of each killing event was recorded. This is because each could influence the mode of killing and disposal, for example common and perhaps sanctioned actions may only be carried out by Khmer Rouge Cadre in Cambodia's capital Phnom Penh at the onset of violence, in which case this information would enable the ICC to strategically prioritize investigations to gather evidence using these three factors.

3.5.1 Cambodian perpetrator type

Table 3.7 shows that perpetrator type was reported in only 44% of cases, a lack of reporting could be attributed to the lack of specification by witnesses, because it is acknowledged that the Khmer Rouge carried out the killings. Witnesses may not have felt it necessary to declare this specific detail, or that the detail was overlooked because of the unstructured manner in which narratives were gathered. Of the 44% of cases Khmer Rouge Cadre were the most frequent, present in 24% of the 159 cases (55% of the cases were the perpetrator type was specified). Soldiers were recorded at 11% of the 159 cases and Chiefs 6%, although Cadre and Chief are both Khmer Rouge operatives, they were

recorded as distinct categories because they are different ranks (Nhean 2010). It is worth noting that more than one perpetrator type may have been present during killing events in Cambodia. Being able to attribute particular ground actions to a specific group of offenders could assist in demonstrating the planning and systematic implementation of killing if that group is linked to the superior perpetrator. For example, an officer would be responsible for the actions of his subordinates and if they only carry out sanctioned forms of killing and disposal then intent of the officer can be inferred more effectively.

Perpetrator	**Frequency**	
Khmer Rouge	38	24%
Soldier	28	11%
Chief	9	6%
Missing	65	59%
Total	159	100

Table 3.7 Cambodian perpetrator type frequency

3.5.2 Cambodian timescale

The timeframe over which killing events happened in Cambodia is represented in Tables 3.8 and 3.9, they show the frequency of events during the years of Khmer Rouge's control in Cambodia, which was reported in 56% of cases. Recording of a specific date was lacking as some witnesses refer to time as the *beginning*, *when Khmer Rouge arrived,* and *when the Vietnamese arrive* rather than exact dates. Reporting of specific dates was also hindered further by the Khmer Rouge policy to restart the country from *Year Zero* (Ponchaud 1978) and subsequent to the rigorous implementation of their policies people found it difficult to recall the true date and time of what they witnessed. Therefore it was deemed necessary to breakdown the timeframe into stages so that accounts that refer to time as 'the beginning', 'the second year' and 'the end' are included in analysis. The use of phases rather than years means that more data could be gathered and still provides an accurate representation of events.

Tables 3.8 and 3.9 shows that killing was initially low but gradually rose each year, before falling towards the end of the Khmer Rouge campaign. The *Instigation* (11%) stage refers the period when the Khmer Rouge took forcible control, initiated in 1974 with taking over the capital city Phnom Penh, then leading to full power over the country in 1975. All events occurring within those years were tallied as belonging to the instigation phase. Killing at this stage was limited to the political opposition (Lon Nol) with the majority of the general population being transported to rural locations to fulfil the agricultural ideology (Chandler 1999a). Killing increased during the *Peak* period (1976-1977), when Khmer Rouge had full and maintained control, and accounted for 26% of cases (46% of those with recorded dates). This increase in killing could be attributed to the increased paranoia of the Khmer Rouge leaders who increasingly viewed the general population as enemies of the state (Abrams 2000) and began killing for arbitrary reasons. Finally, the *Conclusion* (1978-1979) period refers to the timeframe over which Vietnamese resistance regain control of Cambodia. During

this period the killing frequencies decline to 19% or 34% of events with recorded dates. The decrease may be as a consequence of the gradual takeover by Vietnamese soldiers. Having a timeline of events and the ground actions that might occur in each could be of evidential importance because it can tie in individual offenders known to be operating and therefore responsible for the types of ground actions performed during that time period.

Year	**Frequency**	
1974	5	3%
1975	13	8%
1976	18	11%
1977	24	15%
1978	20	13%
1979	9	6%
Missing	70	44%
Total	159	100%

Table 3.8 Cambodian killing event frequency by year

Phase	**Frequency**	
Instigation	18	11%
Peak	41	26%
Conclusion	30	19%
Missing	70	44%
Total	159	100

Table 3.9 Cambodian killing event frequency by phases

3.5.3 Cambodian locations

During Khmer Rouge control Cambodia was divided into 8 administrative zones based on historical province boundaries and weighted by administrative importance (Nhean 2010). For this study the 8 administrative zones were used to create 6 zones that divide the country into approximately equal geographical zones whilst maintaining the administrative framework (See Appendix). This was necessary because borders between zones altered throughout the Khmer Rouge control and reporting of event locations were not consistent. Using the 6 zones location of killing event could be identified in 89% of cases. Table 3.10 shows that North West (25%) and South Central (23%) zones account for most of the killing but overall there are no extremes or concentrations of killing. North (6%) and East (0%) zone are the exception and may be the result of fewer killings because these regions may have resisted the full impact of the Khmer Rouge regime because of their proximity to Vietnam, whose army was advancing to regain control of Cambodia (Kiernan 2008). Moreover, the disparity may be due to sampling issues at DC-Cam as these locations are more remote, and limits either the collection or deposition of testimonies. That being said it could then be assumed that there would be a higher number of reported incidences from Phnom Penh in the South Central

Zone yet slightly more were recorded from the North West. This observation is also notable in that Phnom Penh was the administrative hub of the regime, yet the level of killing expressed does not dominate. The significance of the distribution of killing events may be revealed through the ground actions expressed in the different zones, and perhaps location has an impact on the type of ground actions. Frequent forms of killing and disposal occurring in an administrative centre could assist the ICC in determining what ground actions can be linked to the administrative regime as they are more likely to be instigated in the stronghold and filter out through time. This notion could also be applied across wider geographical areas as it is not yet known how killing methods may vary away from the control of administrative hubs. For example, it is possible that offenders may become more or less violent, and so an exploratory study to examine differences in variations of killing methods geographically would theoretically, methodologically and practically advance knowledge of the material elements of war crimes.

Zone	**Frequency**	
North West	39	25%
North	10	6%
South Central	37	23%
South West	30	19%
West	25	16%
East	0	0%
Missing	18	11%
Total	159	100

Table 3.10 Cambodian killing event frequency by location

3.5.4 Rwandan perpetrator type

Table 3.11 shows that perpetrator type was reported in all cases and the most frequent type was interahamwe (81%), but more than one offender can be present during a single killing event. Nonetheless the domination of interahamwe was expected because they are a militia group comprised of civilians provided with machetes and then trained to kill (Verwimp 2006) by state forces. There are no established facts about how they were organized and controlled (Fletcher 2007) only that they were comprised of civilians, but witnesses made a distinction between interahamwe and civilians in 12% of cases, particularly when referring to killings by their neighbour. The ambiguity between the two groups could be resolved through the ground actions they perform. Logic suggest civilians would use more traditional weapons, machete, stones and bows in conjunction with looting, whereas the militarized interahamwe would conform to actions translated from superior command and criminal intent. Soldiers were reported as present in 41% of cases and their ground actions are likely to be dominated by weaponry, such as firearms and explosives, additionally soldiers are closely linked to the ruling regime and almost certainly enforcing state policies more directly. Again attributing particular ground actions to a specific group of offender can assist the ICC in focusing differentiating

offenders, and tailoring investigations to infer their level of participation in the overall crimes, as opposed to operating within their own personal agendas that may not reflect the intent of the superior perpetrators.

Perpetrator Type	Frequency	%
Interahamwe	109	81
Soldier	55	41
Policeman	24	18
Civilian	16	12

Table 3.11 Rwandan perpetrator type frequency

3.5.5 Rwandan timescale

Tables 3.12 and 3.13 show the frequencies of killing events occurring between 6th April 1994 and 23rd June 1994 (Operation Turquoise take over). It must be noted that not all witness accounts specified the exact date of the killing event recorded, in fact out of the 106 events recorded in April only 60 provided this detail, and fewer specified the exact dates in May, or June. The majority of killing took place in April (79%) and mostly in the two weeks after the death of President Habyarimana on the 6th (Table 3.13). Verwimp's (2006) study on killing in Rwanda's Kibuye prefecture established the 75% of its Tutsi population were killed by the end of April but the study only covered one prefecture, and not all prefectures would have had the same killing because of the geographic distribution of the Tutsi population throughout the country (Verpoorten 2002).

To counter the lack of reporting of specific dates the timeframe of the crimes was broken down into stages which enabled witness statements that included references such as 'the end of April' to be included in the study. Table 3.14 shows that the instigation period (1st April-14th April) accounted for 32% of killing events in the sample. The peak period (28%) covered the last 2 weeks of April as the killing regime took hold. This opposes the rates of killing found in Cambodia which had a lower instigation phase that gradually increased and then declined, the rates in Rwanda perhaps reflects frenzied killing which began with a ferocity that meant numbers of the target population quickly declined so too did the rate of killing. If this is indeed the case then it could be assumed that the frenzied nature of the crime would be reflected in the type of ground actions associated with the time period. For example, if surface disposal only occurs in the instigation phase then it could be implied that this ground action occurred out of haste and perhaps not attributable to superior perpetrator instruction. The concluding phase (9%) covers the entire months of May and June and although the timescale was disproportionate to the other phases, the frequency was so low that dividing into weeks would not have altered the fact that rates of killing had markedly reduced.

Time	Frequency	%
April	106	79
May	7	5
June	5	4
Missing	17	12

Table 3.12 Rwandan killing event frequency by month

Time		Frequency	%
April	Week 1	11	8
	Week 2	33	24
	Week 3	29	22
	Week 4	8	6
May		7	5
June		5	4

Table 3.13 Rwandan killing event frequency by week

Phase	Frequency	%
Instigation	44	32
Peak	37	28
Conclusion	13	9
Missing		

Table 3.14 Rwandan killing event frequency by phase

3.5.6 Rwandan locations

In 1994 Rwanda was comprised of 418 sectors and 30 districts and 12 prefectures dividing the country into administrative regions. In 2006 the government created 5 provinces encompassing the old administrative framework and split the country into North, South, East, West and Kigali (central) provinces (Gwillim Law 2011 http://www.statoids.com/urw.html [Accessed 27th June 2013]). These 5 provinces were used as the location categories into which the 135 killing events were assigned for analysis. Provinces were chosen because they provided the most consistent reported form of classification. Cases at a district and prefecture level proved complex when trying to determine the exact location of events because villages can have the same names as districts.

Table 3.15 shows an equal spread of reported killing events across Rwanda with the exception of the Northern Province (0%). This may be the fact the Northern Province held the highest concentration of the Hutu elite and lowest proportion of Tutsi's in the pre-genocide era (Jefremovas 2002), consequently fewer to kill, or survivors to provide witness accounts. The more extremist Hutu originated in the north (African Rights 1995), perhaps the minority Tutsi population moved to neighbouring prefectures soon after the onset of violence aware of the risk posed to them living in volatile demographic of the north of Rwanda (Verpoorten 2010). The remaining 4 provinces showed no marked difference between each and only a 10% change from the lowest to highest frequency. Kigali central had the highest frequency in that 30% of recorded events which was expected given Kigali is the governmental mainstay from which command would have been provided, coupled with

the high population density makes for easier killing, yet frequency was not markedly higher than the other provinces. According to Verpoorten (2010) the southern province suffered the greatest loss but here 25 % of reported events were recorded in the southern province. This variation may be due to misrepresentation of witness testimonies because it would have been easier to obtain accounts from people in closer proximity to data collection centres, or perhaps there are fewer survivors of events in the south to recount their experiences.

Province	**Frequency**	**%**
Kigali Central	41	30
South	34	25
East	27	20
West	33	24
North	0	0

Table 3.15 Rwandan killing event frequency by location

3.6. Implications

This descriptive chapter is one of the first attempts to provide empirical prevalence rates of ground actions in two different conflicts. The empirical summaries of the data demonstrate that there are a wide variety of behaviours that make up the material elements of a war crime, more so than what has been revealed in historical accounts of events. How all these different behaviours contribute to the understanding of war crimes has not been previously addressed empirically or historically. This study sets out to instigate discussions about war crime offence behaviour and contribute to the development of a conceptual framework of the offence.

This empirical summary has shown that the actions subordinates use to kill and dispose of victims are largely similar in both conflicts, that is, they beat, use a weapon and bury. These actions do not offer a new view point about behaviour and support what is outlined in historical accounts, however when empirically examining all the actions between the two conflict locations inferences about behaviour can be made. For example the use of firearms and surface disposal in Cambodia occurs notably less than in Rwanda which suggests that material elements of the crime could be influenced by access to resources, weapon availability, or the type of offender carrying them out. Additionally, the examination of all actions in relation to all other actions in the study that provides the context of a behaviour and develops a fuller picture of the nature of war crimes. The examination of each individual ground action does not highlight the prevalent behaviours or their systematic implementation during a conflict and hence their attachment to superior perpetrators. Instead it is apparent that all actions must be examined in relation to all other actions in order to conceptualize the crimes in a meaningful and evidentially useful manner and will be explored further in the coming multivariate analysis chapters.

Chapter 4
Theoretical framework

Descriptive analysis of all ground actions used during international crimes in Cambodia and Rwanda show that the frequently occurring actions of beat, firearms and grave burial correspond with types of violence outlined in historical accounts. The corroboration demonstrates that the ground actions selected for this study accurately reflect events of both conflicts. Whilst the well documented actions were prominent in the sample and present a baseline of behaviour against which offences can be contextualised there is limited evidential assistance to ICC investigations. Inferences about offender behaviour cannot be formed through the analysis of individual actions. This is shown in studies of domestic crimes such as murder (Salfati and Bateman 2005), rape (Grubin *et al.* 2001) and arson (Canter and Fritzon 1998) whereby classifying actions into groups or, themes of behaviour, can highlight patterns of behaviour that can assist investigations. Canter *et al.* (2004) suggests that using a thematic approach to classifying offences offers a more robust approach to making inferences, rather than adding meaning to behaviours on an individual basis, because groups of actions with similar constructs add support to concepts. A robust approach to forming theories is required here because of the legal and practical ramifications if inferences are not well founded. This chapter will set out the fundamental principles of classifying offence behaviours which are comparable with international crime investigations. It will set the foundations for the subsequent multivariate analysis of ground actions in Cambodia and Rwanda (Chapters 5, 6, and 7) and contribute to the development of an empirical model that will help to infer knowledge and intent of both subordinate and superior offenders, and thus contribute to ICC investigations.

4.1 Introduction

Previously, multivariate analysis has been used to determine if observable behaviours can be differentiated into themes of behaviour and identify the type of offender likely to carry out the offence (Canter and Heritage 1990, Alison *et al.* 2010), but few empirical studies test assumptions (Snook *et al*. 2008). Canter *et al.* 2004 used multi-dimensional scaling (MDS), which includes SSA, to determine if offence behaviours from serial killers could be classified into the organised or disorganized themes. They found that by examining the co-occurrence of offence behaviours such as torture, overkill, sex and beat no discrete sub-sets of behaviours can be distinctly classed as organized, or disorganized. Instead a sub-set of offence characteristics were found that tended to be organized, with disorganized being rare but not a distinct type (Canter *et al.* 2004), thus making it difficult to categorize offenders (Snook *et al.* 2008). These findings are relevant to this study because the subordinate offenders carrying out instruction of the superior offender are likely to be organised and other offenders with personal objectives could form the rare but not distinct unorganized type. Being able to make such inference about offender behaviour can assist the ICC in determining the

culpability of an offender, for example distinguishing a subordinate whose actions comply with instructions and no more, or the subordinate who goes above and beyond what is required to achieve a task and thus responsible for their individual actions. This shows that behavioural inferences from domestic offences can be applied to international crimes and therefore supports the initiative of applying behavioural models to war crime offences and assist the investigative process.

Domestic crime analogues are not only suitable when applying behavioural theory to international crimes but the methods used to analyse offence behaviour is also applicable. Empirical analysis of stranger murder by Canter and Salfati (1999) examined the validity of instrumental and expressive themes of behaviour, to determine if offence behaviours reflect the cognitive processes of the perpetrator. Using Smallest Space Analysis to assess if the crimes could be differentiated by behavioural style they found that a dichotomy exists. When testing the framework to ascertain if individual crime scenes could be attributed to one of the themes it was discovered that 65% (53 out of 82 cases) of stranger murders within the sample could be classified. It was determined that the crime scenes actions could be used to analyze themes, and the behaviours thematically linked to characteristics of the offender. Salfati and Canter (1999) study demonstrates that crime scene evidence from witness accounts can be used as valid variables, from which inferences can be made following appropriate and rigorous multivariate modelling. The current thesis proposes that this framework is an appropriate and effective framework to adopt, in order to advance knowledge about war crimes. Furthermore, the use of Smallest Space Analysis in Salfati and Canter's (1999) example shows that empirical models can assist in differentiating offenders in a manner that is of use to investigators and advances knowledge from the limited inference that could be derived from the descriptive observations in Chapter 3.

4.2 Offender differentiation

Similarly to domestic crimes investigating forces wishing to prioritise suspects so does the ICC to target the most responsible offenders. Prioritization stems from concept that actions exhibited at a crime scene reflects the background characteristics of the offender (Goodwill *et al.* 2009). With this in mind it can be assumed that the different types of offender operating within international crimes can be distinguished from each other based on the crime scene actions attributed to them. Although superior perpetrators normally do not physically carry out ground actions left at a crime scene, they are responsible for the subordinates that implement their orders, and it is argued here that characteristics of the superior could be inferred indirectly through the actions of the subordinate. This assumes that offenders lower in command rigidly implement orders, however it is apparent from the wide range of killing and disposal behaviours in Chapter 3 that this may not be the case. The position argued in this thesis so far is that some offenders use war crime as a cover for personal gain. Separating the ground actions affiliated with subordinates implementing orders from other offender actions is of benefit to the ICC because those who follow orders may be able to use the defence of

duress to mitigate against their culpability of their actions. Duress is one of four defences (mental disease, intoxication, self defence, duress) recognised by the Statute (UNGA (1998). Rome Statute. UN Document A/CONF.183/9 Article 30. Para. 1). Subordinates operating outside, or above and beyond the actions affiliated with the superior command are unlikely to be performing under duress and therefore would be unable defend their behaviour. Differentiation can assist the ICC prioritize the investigation of subordinate actions linked to superior orders because it is these ground actions that will ultimately demonstrate the level of planning, implementation and intent in carrying out war crimes, thus aiding the prosecution of the most responsible offenders. This is because differentiation is focused on differentiation of crime scene actions, after which it can be established if they relate to characteristics of offenders in a meaningful way. Additionally, the distinction between subordinates offending as a direct result of orders and perpetrators who offend as a result of personal motivations can also enable the ICC in determining the level of culpability amongst the subordinate offenders based on their individual actions. From this it could be assumed that ground actions during international crimes could be classified into organised and disorganized, given the planning and co-ordination required to carry out large scale killing. However studies have shown such dichotomies of behaviour are flawed (Canter *et al*. 2004) because of external factors such as environment, victim interaction (Canter and Heritage 1990), offender learning (Canter and Young 2003). This is considered as part of this study and Chapter 7 will examine if variances in behaviour are affected by the factors of time, perpetrator type, and killing event location. This will assist investigators in focusing their search for evidence of offence actions and help strategize the search for evidence of war crimes.

4.3 Offender consistency

The classification of crime relies on behaviour consistency of the offenders, that is whether offenders will be consistent at a general level (the type of crime they commit), thematic behaviour level (type of behaviour they exhibit), or the individual actions offenders commit (Grubin *et al.* 2001, Woodhams and Toye 2007 and Salfati and Bateman 2005). It can be assumed that during international crimes offences subordinate offenders would consistently perform the same killing and disposal actions across their offence participation if they are following the instructions of a superior. In which case serial crimes would be the closest analogue and a study of serial murders by Salfati and Bateman (2005) determined that offenders were fairly consistent in conforming to expressive and instrumental themes of aggression across three offences. Consistency across serial crimes was also demonstrated during robberies (Woodhams and Toyes 2007), and Canter (1994, p. 347) suggests that "the way an offender carries out a crime on one occasion will have some characteristic similarities to the way he or she carries out crimes on other occasions". However a study of rape by Grubin *et al.* (2001) found that aspects of offender behaviour can evolve over a series of crimes, and they can change from one behavioural subtype to another. Sorochinski and Salfati (2010) set out to examine if perpetrator

behaviour was consistent during serial murder by using police reports of the crimes carried out by 19 serial offenders. Using Smallest Space Analysis to determine if there was consistency, or change, within planning, wounding and victim-offender interaction subgroups it was established that there was indeed change within the planning subgroup. During planning it was discovered that the offender most often changed their approach between the first and second offence, but on the third they reverted back to the initial plan. This behaviour could be attributed to the theory that offenders learn from their experience and they experiment (Canter and Young 2003). However Sorochinski and Salfati (2010) only examined three killings for each of the offenders, and such an assumption may change as the remainder of the offender's criminal portfolio is examined. The wounding subgroup was the least consistent element of the crimes. This is perhaps indicative of the inherent limitations of examining crime scene behaviour which cannot account for external factors such as environment, changing motives of the offender, and reaction from victim (Thijssen and De Ruiter 2011). The offender-victim interaction subgroup was the most consistent behaviour across serial murder, variables such as victim binding and gagging were observed in this subgroup which can be indicative of controlling the situation and planning. Given the above findings it can be argued that offender consistency is likely to occur during war crimes, especially as those performing the physical acts are mostly doing so under the direction of superiors. However, it was ruled that there was change within the planning group of serial offences, which in the case of war crimes could suggest that subordinates may change their behaviour perhaps as a result of external factors, or that they learned new behaviours as they repeatedly carry out killings over and over. From the ICC's perspective establishing if subordinate offenders have consistent behaviour and that external factors could influence this behaviour could aid investigators in differentiating the actions linked to superior offenders, from actions performed out of ulterior, personal motives. Not only can this knowledge contribute to the understanding of war crime offences on the whole it can help the ICC to focus their investigation strategies. Furthermore, the methods employed by those examining domestic crime behaviour and the pertinent inference revealed support the methodological approach used in this study as it aims to make similar types of determinations from war crime behaviour. Whilst this thesis is not able to establish consistency because it was not possible to attribute crimes to common perpetrators, empirical models of variation in killing methods are the first step in the investigative psychology framework towards establishing ways in which offenders may behave consistently; following which consistency studies can be done with subsequent data.

Consistency has already been highlighted within war crimes through the descriptive analysis of crimes scenes in the form of mass graves. Manning's (2000) report summarizing findings from forensic archaeology and anthropology examinations determined that the selection of victims, restraining them, shooting them and then disposal in mass graves was indicative of an execution system of behaviour was widespread in Srebrenica. Although the findings of Manning's report are important as it formed part of the International Criminal Tribunal for the Former Yugoslavia (ICTY)

evidence, the actions brought to the fore were highlighted because of their frequent occurrence. There was no assessment of how these actions compared with all other forms of violence occurring during the offence to help contextualize events, therefore it is unclear if only these behaviours constitute execution, or do they form a part of a larger behaviour theme of actions performed by subordinates. The lack of context means that inferences made from frequently occurring actions may not be representative of all war crime activity in that area and may be flawed. Again this argues for the use of multivariate analysis of all ground actions attributed to war crimes, because having a baseline to draw upon would ensure more accurate representation of the information and a fairer more transparent judicial process.

4.4 Behaviour domains

Being able to identify execution as a theme of behaviour and determine if subordinate offenders prescribe to it would help the ICC to demonstrate that superior offenders were intent on destroying a population group. However, war crimes have not been afforded the same type of analysis as domestic crimes which have established, and tested behaviour domains in which offenders can be classified. As previously mentioned in Chapter 1 a single study of war crime behaviour has identified domains of behaviour subsequent to interviewing 80 perpetrators indicted by the ICTY for crimes in Bosnia. The study by Hollows and Fritzon (2012) set out to test the homology assumption and revealed that rather than being a homologous group that there were four themes of behaviour. They determined that background characteristics of offenders, such as education and social background was related to the manner in which they offend, a finding useful here as it indicates that the ICC could use the manner of offending to prioritize offenders. For example if an execution theme of behaviour was identified and related to militia rather than civilians, then resources could be focused on investigating the activities of the militia as they are most probably fulfilling the instructions of a superior perpetrator. This is particularly relevant in the case of Rwanda because of the interahamwe used firearms and civilian's machetes in Rwanda, and if firearms form part of the execution theme of behaviour then historical suggestions that the Rwandan government distributed weapons to interahamwe and the international crimes were planned can be corroborated. As a part of their study Hollows and Fritzon (2012) suggested that 4 themes of behaviour existed within international crimes; *Expressive*, *Conservative*, *Adaptive* and *Integrative*. These forms of behaviour are not unique to war crimes, they are frequently identified within the range of domestic crimes, but the theory underpinning each of the themes is unique to each type of crime.

4.4.1 Expressive behaviour

A principal theory attached to crime is the dichotomous classification of offence behaviour into "organized" or "disorganized" (Canter *et al.* 2004) and "instrumental" or "expressive" (Salfati and Canter 1999, Salfati 2000). The dichotomies stem from the concept that violent actions are the result of predatory (premeditated, absence of emotion and threat) or affective (emotional, anger, fear and response to perceived threat) aggression responses to a situation (Meloy 2006). In the context of murder Salfati (2000) determined that expressive behaviour consisted of actions suggestive of an extreme physical attack whereby the offender might bring a weapon, or remove evidence from the scene. Removing evidence can be indicative of forensic awareness but also that it is probable that the victim is known to the offender (Salfati 2000). The same theme was identified by Hollows and Fritzon (2012) and the inferences are comparable as they determined that emotional characteristics are displayed and acts are sadistic in nature. The variables associated with expressive behaviour during the Bosnian genocide included humiliation and inhumane treatment of victims, viewed as sadistic because of the assumption that expressive perpetrators are amused by torturing others (Baumeister and Vohs 2004). It is not clear from Hollows and Fritzon's (2012) study what physical actions constituted humiliation, although they defined humiliation as a way of inflicting psychological harm on victims and included torture, which encompassed the acts of castration, electric shocks to genitalia, amputation. Similar types of actions were recorded for this study, and it could be argued here that perhaps penis removal and foetus removal would be classified as part of an expressive theme. In which case offenders carrying out these actions are going above and beyond what is necessary to kill eliminate their victim and therefore may be satisfying a personal agenda against someone they know. It can therefore be suggested that subordinate offenders performing actions classified as being expressive do not reflect the intentions of a superior perpetrator and the ICC could chose to not to prioritize the investigations of these type of offenders, but instead refer them to domestic courts. However, as discussed in Chapter 2 it was also inferred that foetus removal could be an organised element of war crime because on a wide scale it can prevent repopulation of the targeted group. This alternative explanation of a single ground action is why an exploratory rather than a confirmatory approach is needed in this analysis to help make clear the conceptual meaning of co-occurring actions.

Non-use of a gun as a weapon also forms part of the expressive theme in Hollows and Fritzon's (2012) study. They state that the use of "weapons such as truncheons, cables, and iron balls appeared to further support the goals of the expressive group and were indicative of their objective to inflict humiliation and prolonged pain" (Hollows and Fritzon 2012, p. 462). The use of firearms in both Cambodia and Rwanda is not understood and the evidential value undetermined. If firearms are allocated to the expressive theme during war crimes again it can be said that offenders participating using firearms are fulfilling a personal agenda, and do not form part of the superior offenders agenda and therefore not a priority for ICC investigations. Furthermore, the historical accounts of firearms being issued to interahamwe in Rwanda to carry out governmental orders could be challenged, again

this is why an exploratory analytical approach to the data is needed and make clear the conceptual meaning of these critical factors. It must be noted that the availability of weapons during war crimes can influence their use, not just the offenders using them. In Bosnia guns may have been more readily available, whereas in Cambodia and Rwanda bamboo clubs and machetes are the most accessible weapon, and may not necessarily be reflective of the personal element of the expressive theme but simply those that have access and those that do not. This finding casts doubt of the potential application of the Bosnian behaviour model to other locations, and argues for case study specific examinations of war crimes, but reinforces the argument for the need to have baseline knowledge of actions and contextualize findings.

4.4.2 Conservative behaviour

The instrumental theme normally opposes the expressive theme and constitutes actions that use victims to obtain something, such as sex or money (Salfati 2000). In the context of murder offenders within the instrumental theme were unlikely to bring a weapon to the scene and use manual modes of killing (Salfati 2000). It is argued that the aggression is a means to an end, and there is no intention to harm anyone, they are simply used to obtain the desired object (Thijssen and De Ruiter 2011). This concept can be applied to war crimes because population groups are killed to gain political power, however there are multiple layers of offenders during war crimes and aim of gaining power over the population is attributed to the superior offender, but the desires of the subordinate physically obtaining the power may not be the same. This difference of objectives could manifest in the classification of ground actions and will be addressed in the subsequent multivariate analysis chapters of both conflict locations (Chapter 5 and 6).

During acts of terrorism (Fritzon *et al.* 2001) and international crimes (Hollows and Fritzon 2012) a conservative theme can be identified and incorporates the instrumental theme associated with domestic criminal offences. Conservative behaviour according to Shye (1989, p. 357) stems from events that, "emerge outside the system and are actualized inside the system." This implies that the desire for power from the superior offenders is actualized by the ordinary offenders under the command of the system. This was corroborated by Hollows and Fritzon (2012) when the conservative theme in their study contained variables such as logistical support, distribution of arms and extermination, all of which are likely to be attributed to superior offenders. It must be noted that Hallow and Fritzon's sample was derived from ICTY court transcripts, and the perpetrator would have already been considered most responsible because they were indicted by the court. However, the variables in their study do not focus on the modes of killing and disposal that can be physically identified and recovered from a crime scene. Physical ground actions are used in this study because when physically recovered from a scene they provide tangible evidence of events and could corroborate if events such as weapons distribution occurred. It is thought that if, for example, firearms form part of the conservative theme in this study then it could be argued that indeed weapons were

distributed to the subordinate offenders who carried out the orders of the superior. This shows that the instrumental theme associated with murder may not fit with war crime models because it stipulates that offenders within instrumental theme would not normally bring a weapon to the scene, but during international crimes this is not the case. Consequently, classification of war crimes needs further examination, to forge better links between the actions of subordinates and superior offenders in order for the ICC to make informed decisions about culpability from the material elements of the crime.

4.4.3 Adaptive behaviour

The complexity of war crimes is shown through the inability to classify them into dichotomies normally attributed to some domestic forms of crime as Hollows and Fritzon (2012) determine that four modes of behaviour best conceptualize war crime offences. This is in keeping with Fritzon and Canter's (2001) assessment of arson and terrorism, whereby variables can also occur within adaptive and integrative themes of behaviour. In reference to terrorism, the adaptive mode of killing is viewed as opportunistic and unplanned, however is most likely to have a successful outcome and is arguably the most sophisticated form of activity (Fritzon and Canter 2001). The sophistication may be why the theme had poor statistical reliability against the perpetrators background characteristics during Hollows and Fritzon's (2012) study of war crimes in Bosnia. They determined that the adaptive theme accounts for those who manipulate their immediate environment and encourage subordinates to perform acts, and includes variables such as giving orders, shelling and extermination (Hollows and Fritzon 2012). Again, how these inferences translate to subordinate offender action is not clear and how they can be construed as opportunistic and adaptive requires contextualization of all behaviours. Although the theme had poor statistical reliability it remained in their study because these offence behaviours are characteristic of leaders and high military rank (Hollows and Fritzon 2012). The fact that their study is derived from offenders the ICTY has already deemed as superior and responsible for the crime it could be suggested that the offenders conformed to the adaptive theme are representative of sub-groups of offenders with criminal objectives that do not conform to the aims of a war crime. This point could be explored further through actions of subordinate offenders, for example, in Rwanda the conservative theme is probably linked to the interahamwe, militarized to 'actualize' the desires of the superior perpetrator, but perhaps the adaptive is linked to the civilian's using the cover of the wider killing as an opportunity for gain. If this is the case then the ICC would be able to determine culpability from all behaviours within the theme not just the most popular, or frequently reported, and therefore widen the evidential capabilities of an empirical model, especially as this study focuses of actions physically recoverable from the crime scenes.

4.4.4 Integrative behaviour

The idea that perhaps the different themes are indicative of a subgroup of perpetrators within the higher ranks is further highlighted in integrative theme. It incorporates elements of expressive behaviour, but is differentiated on the basis of the relationship between the perpetrator and the victim, and a response to a perceived injustice (Hollows and Fritzon 2012). During an act of terrorism it is indicative of lone perpetrators, who are psychologically disturbed, as opposed to having political objectives and they are likely to behave in an erratic and irrational manner (Fritzon and Canter 2001). It is possible for elements of this theme to be comprised of expressive and sadistic variables as indicated by the use of rape, torture, explosives and guns during war crimes in Bosnia (Hollows and Fritzon 2012). These physical actions are likely to be performed by subordinate offenders on the ground and have been recorded in Cambodia and Rwanda, if they do form part of the integrative theme then it counters the preconceived notion that firearms and explosives will only be associated with the conservative theme following the militarization of the population by superior perpetrators. This too highlights the need to examine the war crimes in terms of themes of offending so that contextualized actions can be used in Court to infer the intent and knowledge of perpetrators. It shows that it is necessary to examine war crimes from the actual actions of subordinate offenders translating the commands of the superior perpetrator into tangible evidence. Determining what actions actually co-occur and form themes of behaviour that different types of offender might subscribe to can develop the ICC's understanding of events, and reveal patterns of behaviour that are beyond the descriptive observations.

4.5 Victims model

The interpersonal relationship between the perpetrator and victim can determine the theme of behaviour they are likely to subscribe to. Canter (1994) outlined three roles normally assigned to victims; victim as object (used, controlled through restraint and threat, involving alternative gains such as theft), victim as person (pseudo-intimacy, create rapport or relationship) and victim as vehicle (vehicle for offenders own emotional state, extreme violence and abuse). These models are often in reference to sexual offences (Canter *et. al* 1998, Salfati and Canter 1999) and serial killers (Hodge 2000), both of which can be encompassed in war crime activity. Hodge (2000) determined that serial sexual murderers who treat the victim as an object will present few emotional behaviours and little interpersonal interactions. In relation to war crimes and Hollows and Fritzon's (2012) themes, it could be suggested that offenders within the integrative theme viewed the victim as object because it contains the variables such as hostage, torture and rape. Acknowledgment of how victims are perceived is important when prosecuting perpetrators of war crimes, dehumanization of the targeted population is pivotal to the development and planning of the crime (Stanton 1998). Attributing a theme of behaviour to victim as object, and consequently dehumanization, could mean that offenders classified to that specific theme support and conform to the directives of the superior perpetrators, in

which case following orders. Conversely, subordinate offenders who treat the offender as person are less likely to be employing superior command but rather their own personal objective and this would be reflected in their actions, such as theft or rape. Finally, victim as vehicle can also be argued as conservative because it is a vehicle by which they are achieving orders they have been given. It is also worth noting that how a victim reacts to a violent attack can alter the behaviour of the subordinate, offender may initially view victim as person, but if victim retaliates the offender may increasingly view victim as object, and their type of violence change. The ICC could use this information as a means of assigning the individual culpability of subordinate offenders, because to view the victim as a person suggests that the offender acknowledges their actions are criminal and are perhaps trying to redress the balance of their behaviour. If this is indeed the case then the ICC may determine that an offender had knowledge that their actions were contributing to the overall war crime, which, according to the Rome Statute is reason for indictment for crimes against humanity, one of the four crimes encompassed within the war crimes collective term. This demonstrates the evidential capacity models of offender behaviour can bring to extracting information about offence behaviour beyond the descriptive analysis, and supports the rationale for this study to examine war crime behaviour and develop a multivariate model that the ICC can draw on to assist in their investigations.

4.6 Study implications

This summary of offender behaviour has shown that substantial inferences can be made from the empirical analysis of crime scene behaviours. Classifying groups of actions can develop knowledge of international crimes in manner that would assist the ICC in inferring that material elements of the crime were carried out with intent and knowledge of some offenders. This summary sets the theoretical groundwork for the subsequent chapters in which ground actions from Cambodia and Rwanda will be examined, to determine if themes of behaviour can be identified and relevant inferences can be made about subordinate and superior offenders.

Chapter 5

Classification of Cambodian ground actions

This chapter examined the 38 ground actions (killing, disposal and interaction) exhibited across the 159 war crime events Cambodia only. Cluster Analysis (CA) was used to classify actions into groups and provide a descriptive interpretation of the sample whilst Smallest Space Analysis (SSA) was used to test clusters, providing methodological triangulation and contribute to theoretical development. This knowledge can assist the ICC to differentiate between groups of offenders, link material elements to superior offenders from which intent to destroy a population group can be inferred, and determine culpability of subordinate offenders. To date no other study has been identified which sets out to differentiate war crime perpetrators using offence behaviours with the exception of Hollows and Fritzon's (2012) study that revealed four themes of behaviour, conservative, adaptive, integrative and expressive. Although these themes are widely tested in domestic studies, there has been no validation of Hollows and Fritzon's (2012) study to see if the themes remain when examining ground actions in locations distinct from Bosnia. This chapter will examine ground actions to determine if variation of crime scene actions can be identified and are the same as those identified by Hollows and Fritzon (2012). From this inferences about subordinate offender behaviour and links to offender knowledge and intent will be explored.

5.1 Introduction

The descriptive summary of ground actions in Cambodia revealed that the frequent modes of killing and disposal conform to the historical accounts of war crimes in that region. According to Salfati and Bateman (2005) behaviours that occur in more than 50% of cases represent core characteristics of the crime. Beating of victims and grave burial, which support the literature observations do not occur in more than 50% of cases, therefore their role in conceptualizing war crimes in Cambodia may be limited. This lack of dominance reveals the limitations of making assumptions based on single actions and not taking into account all actions that may take place over the course of the crime. Empirical examinations of crime scene actions have shown that reliable assumptions can be made when groups of co-occurring actions form themes of behaviour (Canter *et al.* 2004). Smallest Space Analysis has been the empirical method of choice in classifying and conceptualizing offences, however it is not without its limitations which Goodwill *et al.* (2014) and colleagues argue can be overcome by using a combined approach of analysis. They suggest that using a combination of multiple correspondence analysis, cluster analysis and discriminant function analysis to define and differentiate crime scene behaviours can reduce the more subjective aspects of SSA and produce a more objective and cumulative results (Goodwill *et al.* 2014). Whilst their method offered an improvement on using SSA alone their results were not markedly different, but offer a more objective means of forming conclusions. In view of the fact that empirical analysis of war crimes has

received limited attention and there are few studies against which to compare and validate findings, CA and SSA were used to examine variables in this study. Furthermore, one of the aims of this study is to provide assistance to the ICC's judicial process and having simple and more objective method of classifying behaviour of a previously unexplored sample will arguably make for more objective models which can be more easily utilised by the ICC and their investigators. It is anticipated that CA will reveal variation in the forms of killing during war crimes and develop an empirical model that will contribute ICC investigations.

5.2 Cluster analysis (CA)

CA classifies individual variables into groups whereby the variables within are similar, yet groups are distinct from each other (Tan *et al.* 2004). In doing so it enables group segmentation, pattern recognition, trend analysis and classification of a large data sample (Boryczka 2009). CA was used in the first instance to determine if the 38 variables could be classified into groups that represent typologically distinct forms of killing. The method was chosen because it offers an objective and flexible means of partitioning variables into groups. According to an ICTY Trial addressing the submission of expert witness statements that encompasses theories derived from knowledge, experience, and opinion, "The probative value of expert witness statements under Rule 89 (C): a minimum degree of transparency in the sources and methods used is required at the stage of admission in order for the chamber to determine whether it deems the statements to have probative value within the Rule 89" (ICTY, 2003, Case No. IT-98-29-T. *Prosecutor v. Stanislav Galic*). Consequently, the transparency CA offers when making decisions on group classifications reduces the subjectivity associated with descriptive summaries, which is especially true in this study given the lack of baseline knowledge against which behaviour should be contextualized.

5.2.1 Sample formation methods

The variables used in CA were identified and summarized through content analysis and is discussed in detail in Descriptive Analysis (Chapter 3). A total of the 38 ground actions across 159 cases were recorded and extracted from witness narratives held at Documentations Centre of Cambodia. Ground actions cover the non-verbal actions the subordinate offender used to kill, dispose and interact with victims as described by the witness. All actions occurred during the Khmer Rouge campaign between 1974 and 1975. An inductive approach was required because of the lack of prior knowledge concerning ground actions during acts of war crimes, and Hollows and Fritzon's (2012) variables did not specify physical ground action, a requirement for this study. Consequently, the content analysis of this study has been data driven and keywords describing modes of killing, disposal and victim interaction formed a database of categorical variables which accumulated during data gathering. With no comparable studies to acquire appropriate variables and definitions the content dictionary (Appendix 1) was formed through a combination of definitions of similar actions in

analogue studies such as serial murder (Salfati 2007) and gang violence (Porter and Alison 2001) as well as the contextual information derived from the collating the sample. Key words that specify the actions of offenders in each of the 159 cases were recorded as categorical variables for analysis. Out of the 38 behaviours 23 refer to manner of wounding, 9 the method of disposal, and the remaining 6 behaviours are actions that contribute to the understanding of the crime, and interaction between the perpetrators and the victims (Table 5.1). Each variable was recorded as a dichotomy stating the presence '1' or absence '0' of the action. This binary input was recorded, tallied and analysed using Statistical Package of Social Scientists (SPSS v. 17) because the CA method in this programme has the ability to "yield correct cluster recovery rates of between 60% and 90%" when used on binary survey responses (Finch 2005, P. 85). Each action was recorded in a database and subsequent referral to this action in each event was recorded as being present or absent was tallied for analysis (See Appendix 2). All 38 behaviours specific to Cambodia were subsequently used in CA and SSA analysis to establish if ground actions can form different themes of behaviour. Full details of sample formation and associated limitations have been discussed in Chapter 2.

Wounding Behaviour	**Disposal Behaviour**	**Victim Interaction**
Head Trauma (Smash)	Grave	Restrain
Firearm	Surface	Bulldozer
Explosive	Cremate	Music
Beat	Water	Blindfold
Stab	Drain	Artefact Removal
Suffocate	Cave	Clothes Removal
Bury Alive	Well	
Burn Alive	Crater	
Rape/Assault	Suspended	
Torture		
Drown		
Liver Removal		
Brain Removal		
Throat Cut		
Dismember		
Strung Up		
Hit against tree		
Strangle		
Behead		
Fed to animals		
Electrocute		
Poison		
Gas		

Table 5.1 Cambodian ground action variables

5.3. Cluster analysis method

The objectiveness and transparency of CA stems from the different measures in place that enable the investigator to choose the cluster solution that best represents the sample. The different measures are chosen based on the type of data and the research questions being asked of the sample. The measures used in this study are set out below.

5.3.1 Procedure

Due to the unfamiliar nature of the data sample the agglomerative hierarchical method of classification was required because there are no preconceived ideas of how many clusters the sample is likely to fit into. Hierarchical agglomeration treats each variable as an individual cluster and over a series of steps the variables are agglomerated into successfully larger clusters until all variables are classified into one cluster (Eshghi *et al.* 2011). Therefore, ground actions that have an underlying relationship are gradually merged to form new clusters. Forming clusters in this progressive manner does not result in an exact cluster solution, it is a guideline (Bartholomew *et al*. 2008), but it offers flexibility in deciding the final solution at the discretion of the interpreter. This is beneficial to this study because contextual knowledge can be drawn upon to justify and make the most appropriate cluster solution. The agglomerative process is not completely subjective, the objective and transparent aspects of the method comes from the being able to measure the points when a cluster is 'nested' within larger clusters (Bartholomew *et al.* 2008). The distance at which this occurs is used to decide if the clusters are indeed distinct enough to offer a theoretical explanation and it is at this point that the experience and knowledge of the investigator can make informed decisions.

5.3.2 Distance measure

The number of steps over which clusters are formed is derived from how the Euclidean distance between variables within each cluster was calculated i.e. the shorter distance between variables in the clusters the more likely they are to be linked (Tan *et al.* 2004). Weighted average linkage method was used because it measures the average distance between all variables in one cluster with all the variables in a neighbouring cluster. This avoids the pull of variables with extreme high, or low values (Bartholomew *et al*. 2008) exhibited in this data sample, and ensures that clusters can be interpreted on subject taxonomy, not frequency of the individual variables. Although frequency is important in forming basic assumptions about the nature of the sample (Chapter 3) it is the co-occurrence of behaviours that give the depth of understanding to the crime (Chapter 4). Canter *et al.* (2004) demonstrated that during serial murders the co-occurrence of low frequency variables formed a sub-set of offenders within the organized behaviour theme, rather than a behaviour dichotomy. Their findings were achieved using SSA, a method in which some advise that extreme high and low frequency variables should be omitted from the analysis. Salfati and Canter's SSA examination of

stranger murder suggested that "variables which occurred in more than 90% of cases or in less than 10% of cases were excluded from the analysis as they were too common, or too rare, to aid in the classification of these offenses" (Salfati and Canter 1999, p. 397). The findings obtained by Canter *et al.* 2004 were achieved by including variables that occurred in 5% of cases. This not only demonstrates the qualitative and quantitative benefit of SSA but also the benefits of CA because there is no requirement to omit variables which may in fact contribute to the overall conceptualization of the crime. Weighted average measures of distance in CA offers a suitable means of encompassing the full range of variables.

5.3.3 Similarity coefficient

In this study the variables are categorical and recorded as binary, that is, the presence of a behaviour is marked at '1' and if the behaviour is not referred to in the narrative then it is marked as absent '0'. Recording a behaviour as absent does not mean that it did not occur, the witness may not have disclosed or witnessed that specific detail. Jaccard's coefficient was used because it accommodates for the possibility of a behaviour not being reported in the narrative accounts by not taking into account mutual non-occurrence (Jaccard 1998), in other words, the similarity between two cases would not increase if a behaviour was absent in both (Bennell and Canter 2002).

5.4 Results

Table 5.2 shows the progressive agglomerative schedule of the 38 behaviours using Jaccard's coefficient as the similarity measure. When using similarity measures the larger the coefficient value the more homogenous the cluster, and when the decrease of the coefficient value between two steps is large is the most suitable point to stop cluster formation (Norušis 2011). The schedule suggests that five clusters is the optimum solution of the sample. The *Difference* column shows the difference between coefficient values at every stage of agglomeration. Between stages 6 and 7 the difference is small at .002 and shows the point when 38 variables form one homogenous group and the point at which cluster formation should stop (Field 2005).

Stage	Cluster Combined		Coefficient	Difference	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2			Cluster 1	Cluster 2	
1	22	26	.571		0	0	14
2	1	1	.351	.220	0	0	10
3	15	27	.333	.018	0	0	5
4	9	23	.267	.066	0	0	21
5	7	15	.231	.036	0	3	16
6	4	14	.194	.037	0	0	15
7	6	12	.192	.002	0	0	18
8	13	17	.188	.004	0	0	17
9	20	21	.167	.021	0	0	27
10	1	3	.158	.009	2	0	12
11	10	11	.130	.028	0	0	17
12	1	8	.125	.005	10	0	16
13	19	34	.125	.000	0	0	19
14	22	25	.118	.007	1	0	20
15	4	5	.108	.010	6	0	23
16	1	7	.090	.018	12	5	24
17	10	13	.084	.006	11	8	22
18	6	24	.082	.002	7	0	25
19	16	19	.079	.003	0	13	23
20	22	35	.067	.012	14	0	25
21	9	28	.067	.000	4	0	29
22	10	18	.056	.007	17	0	24
23	4	16	.055	.001	15	19	26
24	1	10	.053	.002	16	22	26
25	6	22	.036	.017	18	20	28
26	1	4	.031	.005	24	23	27
27	1	20	.024	.007	26	9	28
28	1	6	.018	.006	27	25	29
29	1	9	.011	.007	28	21	30
30	1	29	.010	.001	29	0	31
31	1	33	.006	.004	30	0	32
32	1	30	.004	.002	31	0	33
33	1	31	.003	.001	32	0	34
34	1	32	.002	.001	33	0	35
35	1	36	.001	.001	34	0	37
36	37	38	.000	.001	0	0	37
37	1	37	.000	.000	35	36	0

Table 5.2 Agglomeration schedule of 38 Cambodian ground actions

The dendrogram in Figure 5.1 is the graphical representation of the agglomeration schedule and supports the 5 cluster solution. The diagram shows the stage at which each variable connects with another and in principle the shorter the distance at which two variables connect the closer the relationship. Using this principle would result in a many smaller clusters with few variables but it is difficult to draw theoretical meaning from few variables. Bacher (2002) suggests that clusters with less than 4 variables are not methodologically sound and forming new knowledge from 1 or 2 variables would be questionable. The ideal number of variables in a cluster is indeterminate and can

be dependent on sample size, for example a sample with 5 variables would render the 4 variable stipulation invalid. These factors contributed to the concluding solution of 5 clusters, all containing a minimum of 4 variables and incorporating all 38 behaviours.

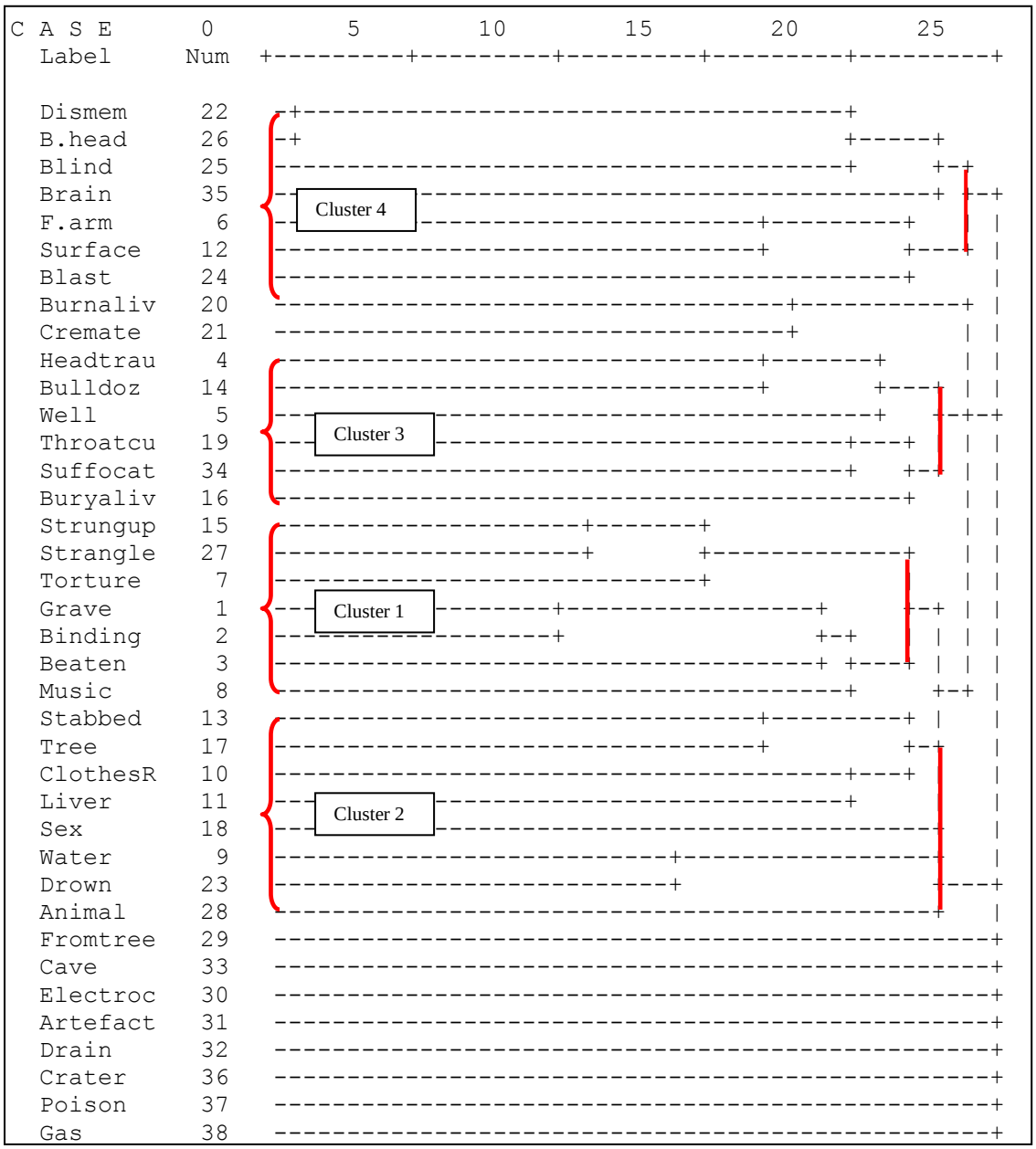

Figure 5.1 Cluster solution dendrogram of 38 Cambodian ground actions

5.4.1 Cluster content

Using the agglomeration schedule and the dendrogram the variables forming each of the five clusters is shown in Table 5.3. The cluster solution shows that the numbers of variables in each cluster are similar, except Cluster 5 which contains notably more. Cluster 1 contains most of the higher frequency variables that form the core ground actions associated with war crime activity in Cambodia. It is argued that these actions are most probably attributable to subordinates implementing superior

perpetrators orders. Restrain and beat form part of the cluster and as suggested during descriptive analysis form a series of actions likely to be approved by superior offenders. In which case would be consistent with conservative theme of behaviour identified by Hollows and Fritzon (2012). Low frequency actions such as strangle and strung up also form part of theme according to CA, and these actions would be normally overlooked potential sanctioned modes of killing. The relationship between the high and low frequency actions and their potential to identify a sub-set of distinct but related form of offending is limited using CA because it lacks the qualitative element of analysis. Hence the use of SSA in this study to not only triangulate findings of CA and offer a robust platform to build theories of offender behaviour, but also to assess the underlying qualitative and quantitative relationships between all variables.

Clusters 2, 3, and 4 contain a mix of middle and lower frequency behaviours which was expected because high frequency variables are more likely to co-occur with each other and form a cluster. Weighted average linkage method of clustering was used to counter this as it measures the average distance between the variables in one cluster with all the variables in a neighbouring cluster and avoid the pull of variables with extreme high and low values (Bartholomew *et al.* 2008). Cluster 2 and 3 are likely to be attributed to the adaptive and integrative themes of behaviour identified by Hollows and Fritzon (2012). Variables classified into Cluster 2 would conform to integrative behaviour, ground actions of stab and liver (removal) support the notion that perpetrators using these mode of killing are likely to be psychologically disturbed and have an erratic manner (Fritzon *et al*. 2001). Cluster 3 would relate to the adaptive theme of behaviour because it includes the use of bulldozer and wells to dispose of victims, both of which are opportunistic and make use of resources. However, head trauma forms part of this cluster, and given the action's association with execution in Cambodia it does not conform to the theoretical underpinning of the cluster. This finding highlights the value in using SSA in conjunction with CA because SSA can examine individual actions with relationship with all other actions of the sample enabling qualitative interpretation to be applied, and perhaps explain the relationship between head trauma with other behaviours. Cluster 4 therefore would fit with the expressive theme of behaviour. During crimes of murder expressive behaviour has been linked to extreme physical attack and bringing a weapon to the scene (Salfati 2000). The ground actions of dismember, behead and firearms support this theory but firearms Hollows and Fritzon (2012) specify that none use of a gun as a weapon form part of the theme during war crimes in Bosnia. Understanding the role of firearms in the context of war crime is important because the manner in which they are used can be indicative of planning if they have been distributed and employed as means of execution. The fact that one or two variables within each of the four clusters does not conform with the theoretical underpinning of the four behaviour themes identified in Hollows and Fritzon (2012) shows that empirical model of war crime behaviour should not be drawn from cluster analysis alone. The shortcoming of CA is the inability to draw on the qualitative aspects of variables and explain or define themes of behaviour, whereas SSA does offer this mean of

interpreting the sample. Finally, Cluster 5 contains lower frequency behaviours and it is considered to be a spurious cluster because it contains the ground actions that have no relation with any other variables in the sample. The dendrogram in Figure 5.1 shows that the individual variables do not form a cohesive cluster, but instead have been classified together during the final stage of the agglomeration process. Nevertheless it could be argued that the ground actions relate to a deviant theme of behaviour performed by offenders not following any form of instruction or leadership. The relationship this cluster has with other clusters in the sample, and the individual ground actions classified within it, may be a sub-set of distinct but related forms of offending. This will be explored further during SSA.

Cluster 1	**%**	**Cluster 2**	**%**	**Cluster 3**	**%**	**Cluster 4**	**%**	**Cluster 5**	**%**
Strung up	7	Stab	7	Head Trauma	18	Dismember	4	Burn Alive	4
Strangle	3	Against Tree	5	Bulldozer	7	Behead	3	Cremate	4
Torture	13	Clothes	9	Well	16	Blind	3	Gas	<1
Grave	47	Liver	8	Throat Cut	5	Brain	<1	From Tree	1
Restrain	33	Rape	5	Suffocate	<1	Firearm	14	Cave	<1
Beat	26	Water	9	Bury Alive	6	Surface	7	Electrocute	1
Music	11	Drown	3			Explosive	3	Artefact	1
						Animal	2	Drain	1
								Crater	<1
								Poison	<1
Conservative		Integrative		Adaptive		Expressive		Deviant	

Table 5.3 Cluster classification of 38 Cambodian ground actions

5.5 Smallest Space Analysis

SSA was used to explore whether the ground actions classified into groups by CA form themes of behaviour. SSA was conducted using a multivariate data reduction procedure (SSA-1, Lingoes 1973) and carried out on the Hebrew University Data Analysis Package (HUDAP, v. 8). This Multidimensional Scaling (MDS) programme was developed from Facet Theory (Guttman 1982) and graphically represents the relationships of variables with every other variable (Canter 1989) in the sample in geometrical space (Shye *et al.* 1994). Plotting of variable relationships in the multi-dimensional space requires calculating the correlations coefficients between variables in the data matrix and plotting the values in a rank order. It is from this that variables are positioned within the space and the variables which are closer together in the space share similarities in some underlying empirical structure. The space can then be partitioned into regions that are said to relate to various psychological themes (Borg and Lingoes 1987) and therefore both qualitative and quantitative differentiations can be made in the same analysis, unlike CA.

5.5.1 Method

The HUDAP programme calculates correlations and coefficients between selected variables within a data matrix and places the values in rank order. This matrix plots the variable points in a geometrical space where the rank order of the correlations are inversely proportional to the rank ordering of distance between points (Amar 2005). Subsequent to the multiple measures of the distances between all the points a 'coefficient of alienation' is produced (Borg and Lingoes 1987) which measures the 'goodness of fit', that is, how well the co-occurrences are presented in the spatial map. The smaller the coefficient of alienation the better the fit (Canter and Heritage 1990) as it aims to reduce the subjectivity of visual relationships, which can vary depending on the individual deciphering the geometrical space. Borg and Lingoes (1987) point out there are no simple, good, or bad correlations, they depend on combinations of number of variables, error in the data and the logical strength of the interpretation framework. In a legal context such subjectivity could have a negative impact on the probative value of results, unlike the more objective decision making of CA. However, Goodwill *et al.* (2014) demonstrated that differences in results between the methods are not significantly different to warrant using one method over another. It is the graphical distribution of variables within the geospatial structure which is critical to the interpretation of themes from the sample, because the relationship between every variable with every other variable to be visually examined (Canter and Heritage 1990). Themes are formed on the assumption that an underlying empirical structure can be determined by the manner in which variables are positioned within the space, that is, their proximity to each other. It is the partitioning of variables into different regions or "radex" of the space that relates to the different themes and qualitative interpretation of the SSA plot (Shye *et al.* 1994). Offenders can then be classified into a themes based on the actions left at the crimes scene and differentiated from those performing actions consistent with another theme of behaviour. It is this fundamental principle that will establish if subordinate offenders carrying out sanctioned form of killing and disposal can be differentiated from offenders who use the cover of war crime violence for personal gain.

5.5.2 Data Sample

The ground actions extracted from 159 cases used in CA are also used in SSA (See Table 5.1 and 5.2). SSA uses the binary information of presence '1' and absence '0' to produce the multidimensional plot derived from an association matrix of Jaccard's coefficients, whereby joint non-occurrence does not affect the relationships.

5.5.3 Procedure

Some empirical studies of offence behaviour advised that variables of extreme frequency should be omitted when using SSA, but the criteria of what is classed as extreme is not defined. Most studies suggest variables that occur in more than 90% and less that 10% of the sample should be

omitted (Salfati and Canter 1999, Woodhams 2008) but Canter *et al.* (2004) and Häkkänen *et al.* (2004) suggest that less than 5% and 1% respectively are acceptable. Other studies have used the ratio of cases to variables to determine the inclusion of variables, the most frequently used ratio being 2:1 (Canter and Heritage 1990, Alison and Stein 2001), and with 159 cases for 38 variables the inclusion of all variables would be accepted. With this in mind SSA was run with just 19 variables because no ground actions occurred in more than 90% of cases, but 19 out of the 38 occurred in less than 5% of cases and were subsequently removed from analysis which will be outlined below. Less than 10% exclusion was not considered, firstly, because of the novelty of this study and having no directly comparable studies, and secondly, more than 50% of variables in the sample would have been excluded, meaning findings would have been formed using an unrepresentative sample of ground actions.

5.5.4 Spatial Plots

Figure 5.2 shows the three-dimensional solution of 19 ground actions following the exclusion of those occurring in less than 5% of cases. This solution has a coefficient of alienation of .07740 out of 24 iterations and is a suitable goodness of fit because the smaller the coefficient the better the fit (Canter and Heritage 1990). Coefficients smaller than .20 are widely accepted as benchmarks in other studies (Canter and Fritzon 1998; Canter and Heritage 1990; Canter Hughes and Kirby 1998). The small coefficient indicates that the plot is suitable for examination and inference made about the underlying quantitative and qualitative structure can be reported with appropriate confidence. The initial examination of the three dimensional plot reveals that the ground actions classified into groups during CA are consistent in the SSA. The ground actions attributed to each cluster are visibly closer to each other. As expected there is a high frequency central core of ground actions and lower frequency variables radiate out to the periphery showing that there is an underlying quantitative structure to the plot. This means that the high and low frequencies do not necessarily form themes but that they act as a range within distinct forms of offending within a theme. Although the coefficient of alienation was low for the three-dimensional solution, the two-dimensional solution was used during the partitioning process because it is technically easier to partition and visually easier to interpret. Figure 5.3 is the two-dimensional solution and has a coefficient of alienation of .21445 out of 30 iterations and also indicative of a suitable goodness of fit. Although this study is slightly above the benchmark studies such as Canter *et. al.* (2003) and Alison and Stein (2001) have interpreted crime behaviour with coefficient above .20, therefore it is argued that this plot is suitable for making inferences about the sample. Also when comparing Figure 5.2 and Figure 5.3 the overall positioning of the variables within the space remain the same, with the exception of Bury (6) and Water (9) which become inverted in Figure 5.3, this is simply due to reduction in the dimensional planes shifting the variables to best fit the two-dimensional space. It is this shift that would cause the coefficient of alienation to increase (Shye et al. 1994).

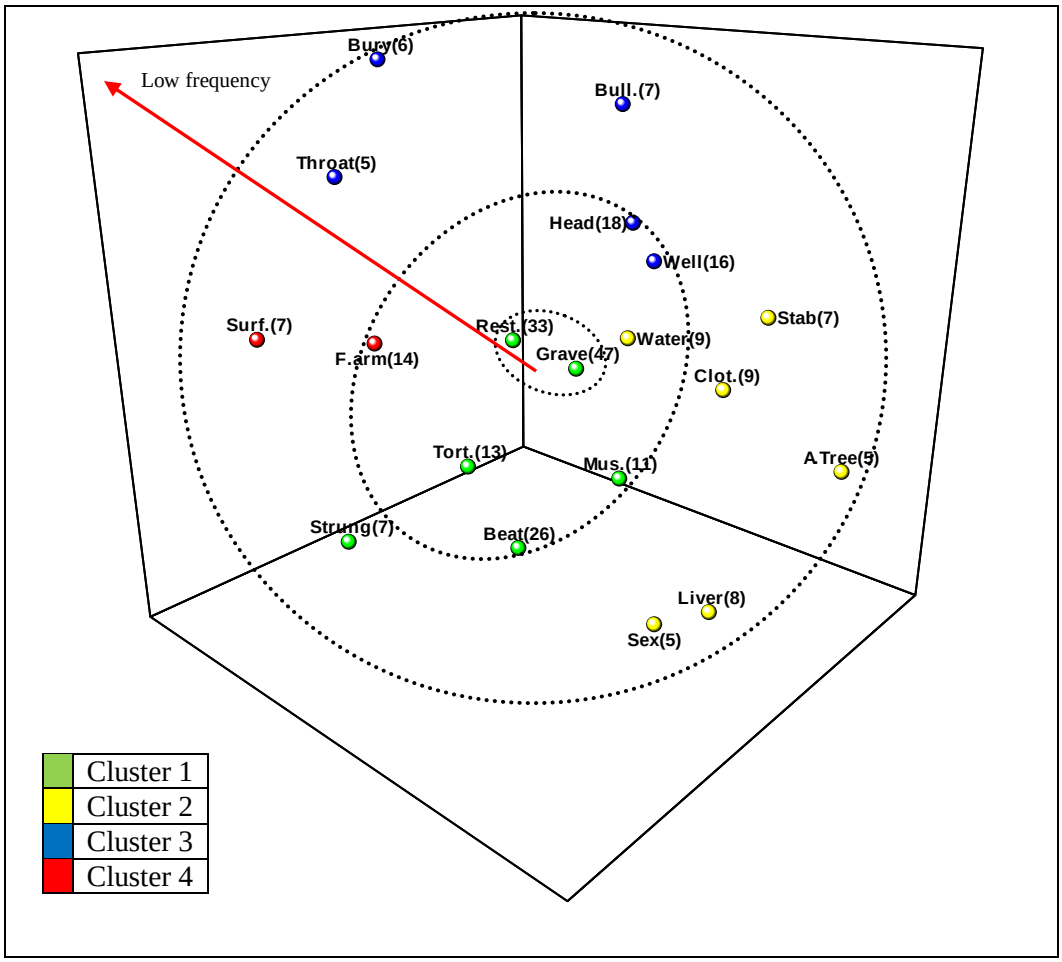

Figure 5.2 Three-dimensional SSA plot showing quantitative range of Cambodian ground action

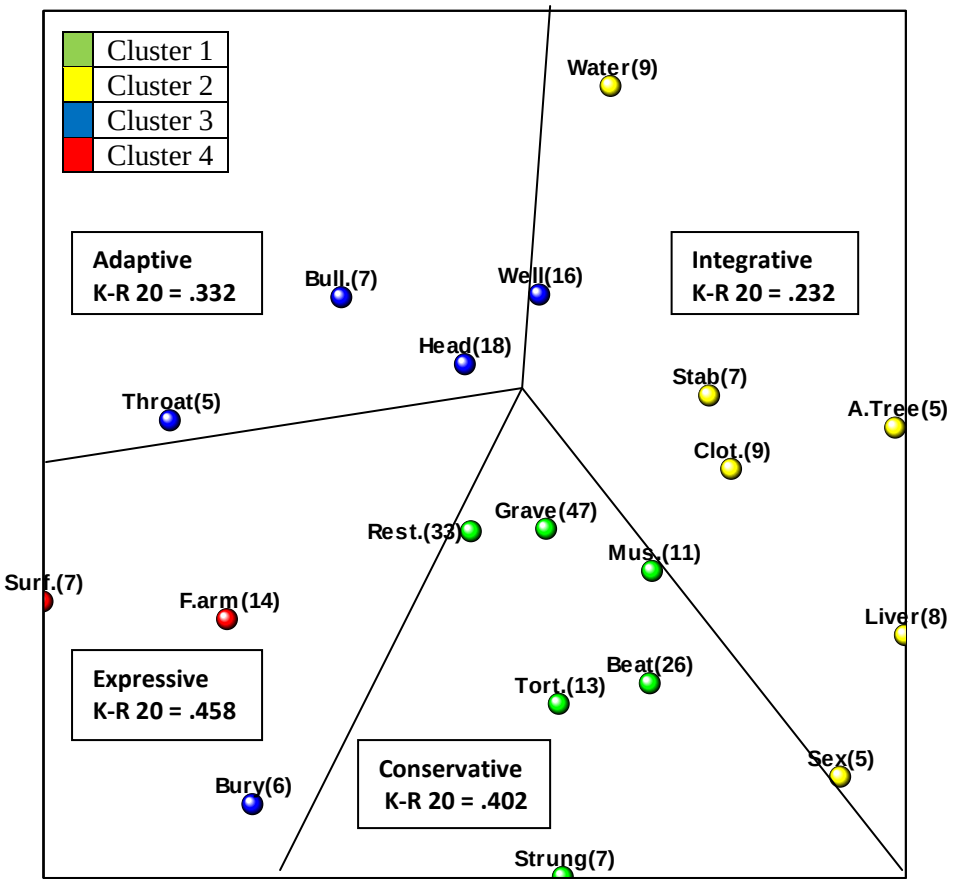

Figure 5.3 Two-dimensional SSA plot showing themes of war crime behaviour in Cambodia

5.5.5 SSA plot partitioning

The partitioning of the SSA plot into themes of behaviour was carried out within in the two-dimensional plot (Fig. 5.3) subsequent to establishing the empirical structure of the sample in the three-dimensional plot. Each point in the spatial plot represents a ground action that specifies modes of killing, disposal and victim interaction across 159 cases. The closer the points are to each other within the space is indicative of how likely they are to co-occur in the sample. It was hypothesised that the variables would be partitioned into four themes, and comparable with the groups identified through CA, as well as the Conservative, Expressive, Adaptive and Integrative themes identified by Hollows and Fritzon (2012). The fifth cluster identified through CA was omitted from SSA because it was comprised of ground actions that occurred in the less than 5% of cases. The partitioning of the plot was achieved by examining the proximity of the variables and their semantic similarities, inferred through literature and knowledge gained from the data collection process. There have been no prior studies that classify ground actions during war crime to assist in the partitioning of the plot. Therefore, the solution is unique to this study and only comparable to Hollows and Fritzon (2012) based on the fact they examined a similar type of offence, but with different forms of behaviour and source of information which must be accounted for when making comparisons. In addition to visually

partitioning the plot using prior theory and knowledge the regions were examined using Kuder-Richardson 20 (K-R20) in SPSS v. 17 to test the internal reliability of each theme. The closer the K-R 20 value is to 1.0 the more reliable the coherent and reliable the region (Alison and Stein 2001). Additionally K-R 20 was used to refine the partitioning to include variables which were on the borders between regions, if internal reliability of a theme was greater with the border variable included then it would be attributed to that particular theme.

5.5.5.1 Internal consistency

The internal consistency of all the hypothesized regions in Figure 5.3 was weak, all values were below .05. The most consistent was the expressive region with a value of .458, then conservative with .402, adaptive with .332, and the least consistent was integrative with a value of .232. The poor K-R 20 values can be the result of the number of low frequency variables in the sample (Shye *et al.* 1994). In this Cambodian study 50% of the 38 ground actions occurred in less than 5% of cases, so there are fewer opportunities to co-occur. Also the number of variables within the theme can have an impact (Häkkänen *et al.* 2004) and the most consistent expressive theme which has just two variables, therefore there is a higher probability of this combination of two actions to co-occur, rather than the three, four, or five variables in the other themes. Aside from the poor consistency of the regions analysis of behaviour themes proceeded because they probably exist within the sample but require a better range of higher frequency behaviours to make clearer identifications and assumptions. Hollows and Fritzon's (2012) assessment of superior offenders the adaptive theme of behaviour was considered to be unreliable with an alpha value of .50. They continued with modelling behaviour and suggested that theme was conceptually valid and consistent with theoretical literature. Furthermore they argue that the nature of adaptive behaviour effects consistency because of the "presence of variables such as encouragement and orders reflects the tendency for adaptive actions systems to respond to external events in the environment by making adjustments to the environment (Shye 1985)" (Hollows and Fritzon 2012, p. 465). This validity of the variables could account for the weak internal consistency of ground action themes here because the variables relate to the behaviour of subordinate perpetrators carrying out the orders of others. Subordinates may change their actions depending upon the command of different superiors or because of their individual form of offending. This point extends to the data sample itself as Hollows and Fritzon's (2012) derived variables from single offenders who may follow a consist form of offending, whereas the ground actions in this study refer to the collective offenders rather than individuals. For consistency to be present within a theme then it would be expected that the majority of the collective to offend in the same manner, but this cannot be assessed in this study.

In Fig. 5.3 gaps in the spatial plot are visible because the core group of behaviours are off centre which is indicative of an 'eccentric radex', and can arise as a consequence of a missing sub-set of offenders or type of offending (Canter and Ioannou 2004). According to their study on stalker

behaviour the sample was devoid of sexual assault and rape behaviour because investigators who provided the sample classified these cases as a rape crime rather than stalker, subsequently they were not sampled. The eccentric radex in Fig. 5.3 may be accounted for by the omission of verbal forms of behaviour as the focus of this study has been on physical ground actions because of the potential assistance results could offer forensic investigations. Whether an eccentric radex affects consistency of a theme is unknown because Canter and Ioannou (2004) did not report their consistency values from their example. Nonetheless this study is exploratory and explanations for the hypothesised regions will be provided because the themes are conceptually validated in other studies such as Hollows and Fritzon (2012). It could be suggest that reducing the number of themes from four to the conservative/expressive dichotomy may improve consistency. Alison and Stein (2001, p. 526) suggest that "breaking down the regional interpretation to four or more themes significantly reduces these alpha coefficients, suggesting that the threefold thematic interpretation is more appropriate in this case than in Canter and Heritage's (1990) original fivefold classification". However this reserved approach would rule out the four clusters identified by CA and not account for the complex framework of war crime offender this study has set out to explore. It is probable that four themes of offending does exist within war crimes in Cambodia but sample and variables validity in this case has had an impact. The four regions of the SSA plot shall still be examined as discreet forms of offending because the themes are "considered to be conceptually valid and consistent with the theoretical literature about the types of crime that are characteristic of genocidal {war crime} perpetrators (Hollows and Fritzon 2012, p. 463).

5.6 Themes of war crime behaviour

5.6.1 Expressive

The expressive region of the SSA is the most consistent and contains just two variables Surface (7) and Firearms (14). In the two dimensional plot (Fig. 5.3) Bury (alive) appears to be within this region, however in the three dimensional plot it remains close to the other variables it was clustered with in CA. The reduction in dimensionality cannot show all the planes in which variables interact and variable positioning can shift depending on the viewing angle therefore, bury (alive) is not considered part of the expressive theme and the internal consistency of the region did not improve when included in the K-R 20 calculation of the expressive region.

The ground actions in Cambodia's expressive theme do not fully support the findings of Hollows and Fritzon's (2012) study because the clearly sadistic behaviours have been removed from analysis here due to their low frequencies. The variables such as dismember and behead, that form part of the theme in CA would support the behaviours attached to the expressive theme because they are sadistic and represent an extreme form of physical attack (Salfati 2000). Nevertheless, firearms which has adequate frequency to merit analysis in SSA is linked to expressive behaviour in the context of serial murder because the theme requires bringing a weapon to the scene (Salfati 2000), but

this is not the case during war crimes (Hollows and Fritzon 2012). This distinction may be due to the nature of war crimes simply because the primary aim of the war crime is to exterminate a population group and the scale of the feat requires weaponry, also war crime offenders are usually military types who would be armed prior to killing taking place. Whereas murder in a domestic context may not be the primary objective of the offence, killing may be a secondary offence subsequent to robbery or rape, hence weapons are not always brought to the scene. Hollows and Fritzon (2012) differentiates between the use and none use of a weapon in their study, but this is not applicable to this study because they examined superior perpetrators often removed from the act of killing, whereas this study examines the ground actions of subordinate offenders, and weaponry is a necessity given their role in the crime. Surface disposal has been classified as expressive from Cambodian ground actions and can be argued as being expressive using contextual knowledge from when the behaviours occurred. According to Thanh Rems witness account "...they began firing at the mass of refugees, killing my father, my mother and several of my relatives. The ground was strewn with corpses. The soldiers cut the heads off bodies, took out their brains and stuffed the skull with grass. Then they photographed and filmed the mutilated bodies. They will probably use this as their 'evidence' in accusing the Vietnamese troops of having attacked this area and massacred the Khmer civilian population" (Can 1978, p. 33). The classification and connotations of victim disposal is not covered by Hallow and Fritzon (2012) but comparisons can be made with their adaptive theme which has expressive components. They determined that the expressive components "include attempts to manipulate the environment in accordance with the actor's internal reality" (Hollows and Fritzon 2012, p. 459). Using surface disposal for propaganda fits with this suggestion but then this behaviour is linked to the adaptive theme and perhaps not indicative of a distinct expressive theme. When considering the poor internal consistency of the regions of the SSA plot (Fig 5.3) and the lack of direct comparison to Hollows and Fritzon's (2012) theme it can be argued that the expressive and adaptive regions should be merged to form one theme of behaviour. Having performed K-R20 with the expressive and adaptive themes together the value did not improve to warrant their amalgamation and the expressive theme will remain as a distinct theme of offending. Consequently, it is difficult to draw meaningful conclusions from this theme alone, especially as only two actions make up theme in this SSA, more insight may be provided when compared with the other themes of behaviour identified here and the subsequent Rwanda study (Chapter 6).

5.6.2 Conservative

The conservative region is the second most consistent theme, it contains six variables, two of which are considered core behaviours in this sample, restrain and grave (disposal). Being in a central position in the plot suggests that they are not suitable for discriminating between types of offending (Guttman 1954) because their high frequency means they are likely co-occur more with other offence behaviours. These two actions remain within the conservative theme because they do not totally

dominate the sample, occurring in <50% of cases, variables over 50% are considered core behaviours (Salfati and Bateman 2005). The variables within the conservative region of the SSA are the same as CA's cluster one (See Table 5.3) which suggests that there is an underlying relationship between the actions, and this has been attributed to ground actions of subordinate offenders fulfilling the objective of the superior offender. The modes of killing and disposal are the most frequent and require the most manpower and time resources to carry out the lethal objective. To beat victims to death and then create a grave for them to be buried in requires more physical manpower and time over the use of weapons and readily accessible disposal opportunities such as wells. These actions are suggestive of sanctioned violence endorsed by Khmer Rouge and corresponds with Hollows and Fritzon's (2012) findings that offenders within this theme are those who aim to gain power that is, instigators rather than accomplices. The ground actions in the conservative theme are the manifestations of the instigators intentions in this study performed by subordinates.

Torture also forms part of the Cambodian conservative theme but in Bosnia it is within the integrative theme, because offenders "adjust to the group environment to be accepted by the group culture" (Hollows and Fritzon 2012, p. 465). They go on to say that their "findings are consistent with studies that have examined the process of torture during periods of conflict and have identified that perpetrators rationalize their actions as being a necessary component for meeting the needs of the systems and their superiors" (Hollows and Fritzon 2012). Torture can remain within the conservative theme in Cambodia because offenders in the adaptive region in Bosnia are from military backgrounds, duty bound to carryout instruction of others. The connection between the conservative theme and subordinate offenders carrying out instruction reflect the offender superior relationship because the Khmer Rouge Cadre that implements the party's ideology is the military personnel of the regime (Vannak 2003). The "strung up" variable does not have clear connections with the underlying theory attached to the conservative theme as there have been no prior references to this form of offence behaviour. It is proposed that this action is conducive with displaying and posing victims for others to find. In serial murder scenarios displaying actions are considered to be an organized behaviour (Canter *et al.* 2004) which forms a tenuous link to the organizational element of the conservative mode of offending. Music can also be viewed as organized because of the forethought required to have this in place when killing occurred.

5.6.3 Adaptive

The adaptive region in Fig. 5.3 has a low K-R 20 of .322 and is comprised of three variables, head trauma, throat and bulldozer. Hollows and Fritzon (2012) have already acknowledged this theme's low reliability using Bosnian perpetrators, which they attributed to the nature of adaptive behaviour because of the unpredictability of offenders who adapt and exploit their environment for personal gain. The adjustments offenders make to suit their motivations and needs (Fritzon and Canter 2001) can be reflected in war crime offending because the timeframe over which the offence takes

place which in Cambodia's case is years. This is something that will be examined further in Chapter 7 which presents the use of MANOVA to determine if time, as well as perpetrator type and location contributes to variance of behaviour. During this time the outlook and motivation of the subordinate offender can change from sense of duty to the using the ongoing conflict for personal gain as resources become increasingly difficult to access. This is especially true in Cambodia as the population on the whole was suffering from overwork and starvation (Kiernan 2008), some offenders could have shifted their focus from observing the Khmer Rouge ideology to personal survival, in which case their manner of offending would also change. The utilization of bulldozer to cover bodies forms part of the adaptive theme because access to this form of machinery would have been limited. Consequently, its utilization was making use of what was available, even though the method of burial counters the philosophy of manual labour associated with the regime (Boraden 2013).

An adaptive offender can reflect a management role owing to behaviours such as providing orders and encouraging subordinates to perform acts of genocide (Hollows and Fritzon 2012). This justifies head trauma's inclusion in the adaptive theme because the action is linked to the form of execution synonymous with the Khmer Rouge (Kiernan 2008), the type of action endorsed by the superiors. However it can also be argued that the ground action is compatible with the conservative mode of offending because of the implementation of orders. Again, this point highlights the importance of being able to apply qualitative reasoning to the development of behavioural themes because with it assumptions based on frequency alone would not enable well considered theories of offending to be proposed. Throat cut also does not have a clear relationship with the conceptual meaning of the mode of behaviour and would be more appropriate in the expressive mode. Throat cut does border the expressive region of the SSA, but the K-R 20 value does not improve with its inclusion and therefore it remains within the adaptive theme. The lack of clear underlying theories being attached to each of the ground actions within the theme supports Hollows and Fritzon's (2012) determination that the adaptive behaviour by its very nature difficult to define.

5.6.4 Integrative

The integrative region has poor K-R 20 value of .232 and is comprised of seven variables rather than the six classified during CA because the K-R 20 value increased with the inclusion of "well" in the region. Integrative behaviour is individually focused with expressive components (Canter and Youngs 2010). It suggests that interactions between the perpetrator and the target victim are likely to be personally significant to the perpetrator (Hallow and Fritzon 2012). The role of victim will be addressed below (See Section 5.7). Baumeister (1997) proposed that integrative behaviours reflect a threaten ego and Canter (2010) a means of restoring an internal aspect of self. Rape in the context of genocide is viewed as a means of gaining personal control by overpowering the victim (Buss 2009). Sexual violence forms part of the region here and supports the underlying theory of the personal gratification through rape and sexual assault. Stabbing and liver removal further support the

characteristics of theme because of the close personal contact required to perform these actions. Integrative behaviour can have expressive components (Hollows and Fritzon 2012) and in the case of Bosnia torture and psychological abuse form part of the theme. In Cambodia liver removal, sex and hitting (child) against tree are comparable, not only because of the close personal contact required to perform these actions, but also the psychological factors attached. The practice of hitting a child against a tree frequently occurred in front of family members or victims awaiting their own killing, and therefore psychologically damaging to those made to observe. Liver removal also encompassed eating it, a practice linked to the ideology that consuming a liver will provide the perpetrator with the victim's strength (Hinton 1998b). Not only can this practice be viewed as expressive because of the level of depravity but the personal gratification attached. The personal gain factor helps integrate the clothing removal variable because the taking of clothing in Cambodia was not used to hinder victim identity as was the case in Bosnia (Skinner *et al.* 2002), but the fact that the population on the whole were deprived of material belongings. Well and water would be better suited to the adaptive region of the plot because they suggest that offenders are adapting to the environment in order to achieve their criminal objective. Visually both variables border the adaptive theme and the well mode of disposal has been classed as adaptive with CA. However given the K-R 20 measure of internal consistency, the variables are more consistent with the integrative theme. The underlying theoretical reasoning for this association is not apparent and reflects the poor consistency of the plot on the whole. Therefore, the plot was examined further using Canter's (1994) victim model to add to the underlying theories of the themes.

5.7 Victim relationship model

Examining the relationship between the subordinate offender and victims could help explain the SSA model of ground actions, given the dehumanization of victims, which some argue facilitates killing on a mass scale (Waller 2007). Using Canter's (1994) model differentiating rapists behaviour based on the role they assign to the victim some inferences can be made about war crime offenders. It was assumed that because dehumanization of victims is a predominant aspect of war crime development (Stanton 1998) subordinate offenders implementing a regimes ideology would view victims as objects or vehicles. Fig 5.4 shows the partitioning of ground actions taking Canter's model into account and the SSA does conform to the behaviour regions, although the internal consistency of the regions remain low.

The victim as person has been attributed to the variables classified as conservative by CA and SSA. This opposes the preconceived assumption that subordinate offenders will reflect the ideology of the superior offenders, who would assign the roles of objects and vehicles to victims as killing would ensure power gain. Instead the behaviours reflect attempts to conceal the killing of victims through the acts of burial and playing of music. Also, because strung up is classed as an act of posing the victim during war crimes the intimacy attached to the action suggests that offenders viewed

victims as a person (Canter 1994). Victim as vehicle is comparable with the adaptive mode of offending because the ground actions of sex and liver removal reflect the use of the victim for personal gain. Finally the victim as object can be assigned to both the adaptive and expressive theme because the modes of killing and disposal show a lack of empathy (Canter and Youngs 2009), especially when leaving victims on surface subsequent to killing. The modes of killing between these two themes include the use of firearms and head trauma which are clinical forms of violence associated with execution styles of killing, synonymous with lack of empathy.

These findings suggest that ground actions could reflect the role subordinate offenders assign to their victims, but this model is not linked to the superior offender. It is argued here that superior offenders in the case of war crimes will assign the role of object and vehicle to victims because to assign the role of person whilst planning war crimes would contradict its definition. According to Stanton (1998) in order for war crimes to occur the target population needs to be classified and dehumanized, which removes the person aspect. Nonetheless the role assigned to victim could be used to infer the knowledge of the subordinate offender and assess their level of criminal culpability. Knowledge of participating in a war crime could be inferred from the assigning the person role to victims because the offender does not personally gain from the killing. During stalking victim as person is applied when the offender recognises the victim as being real but unimportant, using a general abusive style of human interaction and simply taking what they want (Canter and Youngs 2012). Following a general abusive style supports the conservative mode of offending because it can be attributed to the core actions of war crimes in Cambodia. Also, the empathy element suggests that offenders operating within the theme humanize their victims and perhaps reluctant to perform the extreme violent actions, but simply carry out the actions required to fulfil their role within the crime. With this in mind it can be argued that subordinate offenders within the conservative theme are killing as a sense of duty, following orders, and perhaps realise that their actions form part of a crime but they have to participate out of duty. If this is indeed the case then the ICC could use the classification of subordinate offender behaviour using the role of victim model to infer their knowledge of the crime. The demonstration of knowledge is central to crimes against humanity convictions because perpetrator acts are committed “as part of a widespread or systematic attack directed against any civilian population, with knowledge of the attack” (UNGA (1998). Rome Statute. UN Document A/CONF.183/9 Article.7. Para. 1.) Consequently examining the ground actions exhibited during war crimes could be used to infer the knowledge of the subordinate offender.

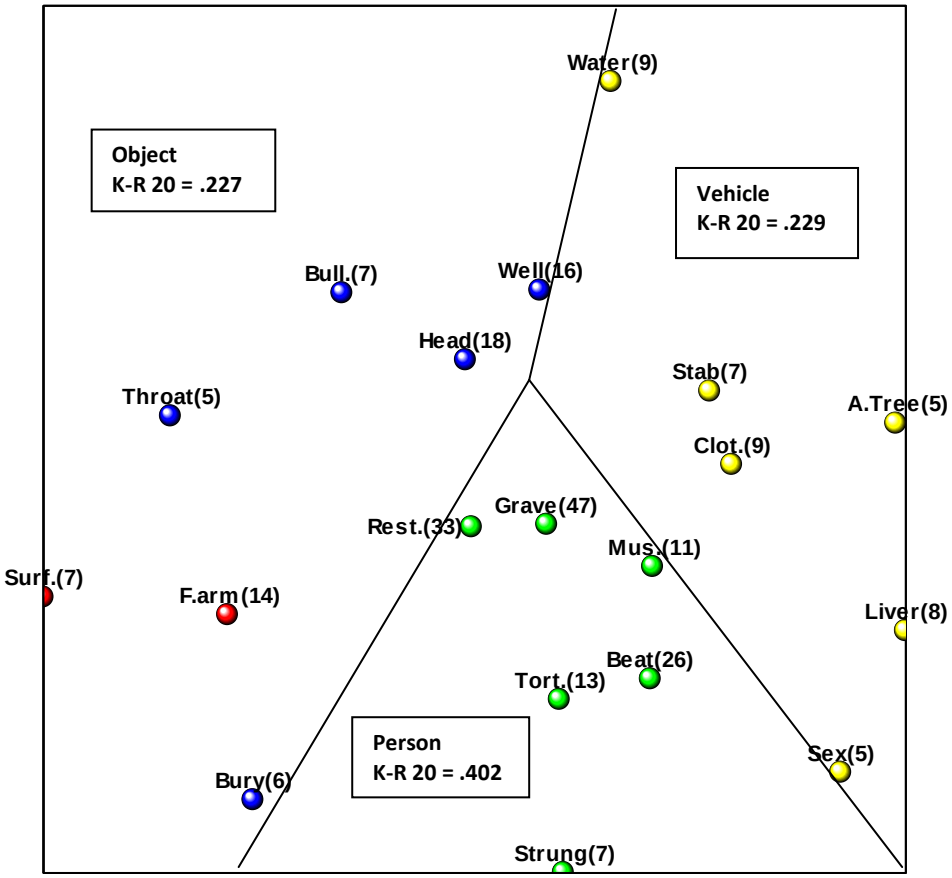

Figure 5.4 Two-dimensional SSA plot showing perceived role of victim in Cambodia

5.8 Implications of findings

Overall findings from both CA and SSA suggest that war crime ground actions performed by subordinate offenders in Cambodia may be differentiated into four themes of behaviour. The results support the modes of Bosnian perpetrator behaviour identified by Hollows and Fritzon (2012). The same four modes of offending have been identified as conservative, adaptive, integrative and expressive but the individual actions classified into each theme are unique to the Cambodian data sample. This suggests that war crimes cannot be conceptualized using a single model but is best achieved by exploring activity at location specific level. This is because the theoretical assumption attached to each action within a theme is dependent on the historical, cultural and economic background of the region under investigation. There is also an argument for empirical models for each type of offender, because the ground actions of subordinate offenders can have differing connotations when performed by a superior offender, for example it can be argued that rape can be performed out of a sense of duty, given that when employed on a large scale limits the growth of the targeted population, however a superior offender is likely to perform this action out of self gratification and personal gain. This determination is important to the ICC because to make inferences about offenders based on their individual actions investigations must be specialized, requiring more strategic methods of collecting evidence. This finding reinforces the rationale for the type of analysis carried out here

because it highlights the shortcomings of ad hoc tribunals using the jurisprudence of other conflict prosecutions to infer the culpability of individual offenders, without baseline knowledge to draw upon and contextualise the behaviour appropriately. This empirical model provides the baseline knowledge of the material elements of war crime behaviour in Cambodia. It enables investigators to draw upon the variables and themes to determine if subordinates offend in a manner that is suggestive of their knowledge and superior offender intent in carrying out war crimes. The use of physical actions to develop this model connects material elements of the offence with offenders disengaged from the acts of violence which has not been attempted in prior studies.

Although the ground action and victim models do suggest some differences in war crime behaviour expression the internal reliability of each region is weak, and inferences require substantiating with conceptual knowledge of war crimes in Cambodia. Consequently, ground actions from Rwanda were explored in the same way to determine if the same themes can be identified using the same type of crime scene actions and will be presented in the next chapter.

Chapter 6
Classification of Rwandan Ground Actions

This chapter presents the classification of 28 wounding, disposal and victim interaction behaviours exhibited across 135 cases of war crime activity in Rwanda. Cluster Analysis (CA) was used to classify actions into groups and provide a descriptive interpretation of the sample whilst Smallest Space Analysis (SSA) was used to test clusters and establish if they could be differentiated into behaviour themes. Firstly this chapter will provide a descriptive interpretation of war crimes in Rwanda and secondly the findings will be compared with war crime offender models from Bosnia (Hollows and Fritzon 2012) and Cambodia (Chapter 5) and establish if conservative, adaptive, integrative and expressive themes of behaviour can be identified in all examples of war crimes. This is to determine if ground actions can be differentiated into the same themes of behaviour and form baseline knowledge of the offence that the ICC can draw from to make inferences about offenders that will contributing to investigations and prosecutions. The CA and SSA analytical methods used throughout this chapter are the same as those employed throughout the classification of ground actions in Cambodia (Chapter 5).

6.1 Introduction

As previously described in Chapters 4 and 5, behaviour associated with crimes such as serial murder (Fox and Levin 1998, Sorochinski and Salfati 2010) and rape (Porter and Alison 2001) can be classified into themes that assist in focusing investigations. War crimes have not been afforded the same level of analysis but analysis of all behaviour in Bosnia (Hallow and Fritzon 2012) and ground actions in Cambodia (this study) show that war crime behaviour can be differentiated into themes, indicating that inferences can be made that would contribute to investigations, as has been the case for domestic crime studies. Inferences start with the descriptive summary of ground actions in Rwanda (Chapter 3) which revealed that the core modes of killing and disposal support the narrative accounts of events, as is the case in Cambodia. It is important to recognise core behaviours because they their higher frequency of occurrence means they can be unsuitable for differentiating themes of behaviour, their frequency means they will co-occur with much of the other variables in the sample. In Rwanda machete (58%) matches Salfati and Bateman's (2005) criteria of core behaviour because it occurs in more than 50% of cases, however firearms (44%) and grave burial (31%) do not, and can still be used to empirically model war crime behaviour in Rwanda. Therefore, empirically modelling war crimes in Rwanda may be constrained by the same factors as Cambodia, such as poor internal consistency of themes. Nonetheless the same methods of classification executed on the Cambodian sample are used throughout this chapter to enable direct comparisons to be made between the two locations.

6.2 Cluster analysis (CA)

Cluster Analysis was performed to determine if 28 ground actions extracted from 135 killing events in Rwanda can be classified into typologically distinct forms of offending. This classification is the first stage in determining if ground actions can be differentiated into themes of behaviour offenders subscribe to and the ICC can use to make inferences about an individual's culpability during war crime offences. The method was chosen for its objectivity and flexibility in forming clusters and its utilization ground actions in Cambodia shows that four themes of offending can be identified. The four clusters identified from Cambodian data remained consistent through to SSA analysis and variables within each cluster group were located close to each other in the graphical space. This reinforces the rationale for employing CA as a method of analysis because of the consistent results produced from examining the Cambodian sample.

6.2.1 Sample formation method

The variables used in CA were identified and summarized through content analysis and discussed in detail in Descriptive Analysis (Chapter 3). A total of the 28 ground actions across 135 cases were recorded and extracted from witness narratives held at Genocide Memorial Centre Kigali. Ground actions cover the non-verbal actions the subordinate offender uses to kill, dispose and interact with victims as described by a witness. All actions and cases utilized in this analysis of Rwanda occurred between 6th April 1994 and 23rd June 1994. Only physical actions that directly contributed to the death and disposal of the victims were extracted and recorded. Key words that specify the actions of offenders in each of the 135 cases were recorded as categorical variables for analysis. Out of the 28 behaviours 17 refer to the manner of wounding, 6 the method of disposal, and the remaining 5 behaviours are actions that contribute to the understanding of the crime, and interaction between the perpetrators and the victims (Table 6.1). All methods of gathering variables, recording, tallying and subsequent analysis have been previously discussed in Chapter 2 and 5 and details will not be covered again in this chapter.

Killing Behaviour	Disposal Behaviour	Victim Interaction
Machete	Grave	Restrain
Gunshot	Surface	Bulldozer
Explosive	Cremate	Warning
Beat	Water	Clothes Removal
Stab	Drain	Loot
Massue	Cave	
Bury Alive		
Burn Alive		
Sex		
Torture		
Dismember		
Stone		
Arrow		
Drown		
Foetus Removal		
Penis Removal		
Throat Cut		

Table 6.1 Rwandan ground action variables

6.3 Cluster analysis method

The measures used in this case study are the same as those employed during the examination of ground actions in Cambodia because the types of data and research objectives are the same. For details refer back to Chapter 5. The hierarchical agglomeration method of variables classification was used in conjunction with the weighted average linkage method of distance measure and the Jaccard's similarity coefficient.

6.4 Results

Table 6.2 shows the progressive agglomerative schedule of the 28 behaviours using Jaccard's coefficient as the similarity measure. The larger the coefficient value the more homogenous the cluster and when the decrease of the value between two steps is large it is the most suitable point to stop cluster formation (Norušis 2011). This schedule suggests that five clusters is the optimum solution of the sample. Between stages 4 and 5 the difference is small at .001 and shows the point when 28 variables form homogenous groups and the point at which cluster formation should stop. The dendrogram in Figure 6.1 is the graphical representation of the agglomeration schedule and supports the demarcation of five clusters. The diagram shows the stage at which each variable connects with another and the shorter the distance at which two variables connect the closer the relationship. Although this has resulted in a series of smaller clusters with few variables it is difficult to draw theoretical meaning from few variables. Bacher (2002) suggests that clusters with less than 4 variables are not methodologically sound and forming new knowledge from 1 or 2 variables would be questionable. The concluding solution is for five clusters all containing a minimum of 4 variables and incorporating all 28 behaviours.

Stage	Cluster Combined		Coefficient	Difference	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2			Cluster 1	Cluster 2	
1	19	21	.500		0	0	5
2	2	4	.394	.106	0	0	6
3	1	3	.364	.030	0	0	9
4	20	22	.333	.031	0	0	13
5	18	19	.332	.001	0	0	23
6	2	6	.263	.069	2	0	10
7	9	10	.258	.005	0	0	15
8	5	7	.244	.014	0	0	14
9	1	8	.233	.010	3	0	10
10	1	2	.198	.035	9	6	14
11	14	15	.176	.022	0	0	17
12	11	17	.167	.009	0	0	18
13	16	20	.155	.012	0	4	20
14	1	5	.151	.004	10	8	15
15	1	9	.127	.024	14	7	17
16	13	23	.125	.002	0	0	21
17	1	14	.077	.048	15	11	20
18	11	12	.077	.000	12	0	19
19	11	24	.077	.000	18	0	22
20	1	16	.050	.027	17	13	21
21	1	13	.044	.006	20	16	22
22	1	11	.041	.003	21	19	23
23	1	18	.026	.015	22	5	24
24	1	28	.003	.023	23	0	25
25	1	25	.003	.000	24	0	26
26	1	16	.002	.001	25	0	27
27	1	27	.000	.002	26	0	0

Table 6.2 Agglomeration schedule of 28 Rwandan ground actions

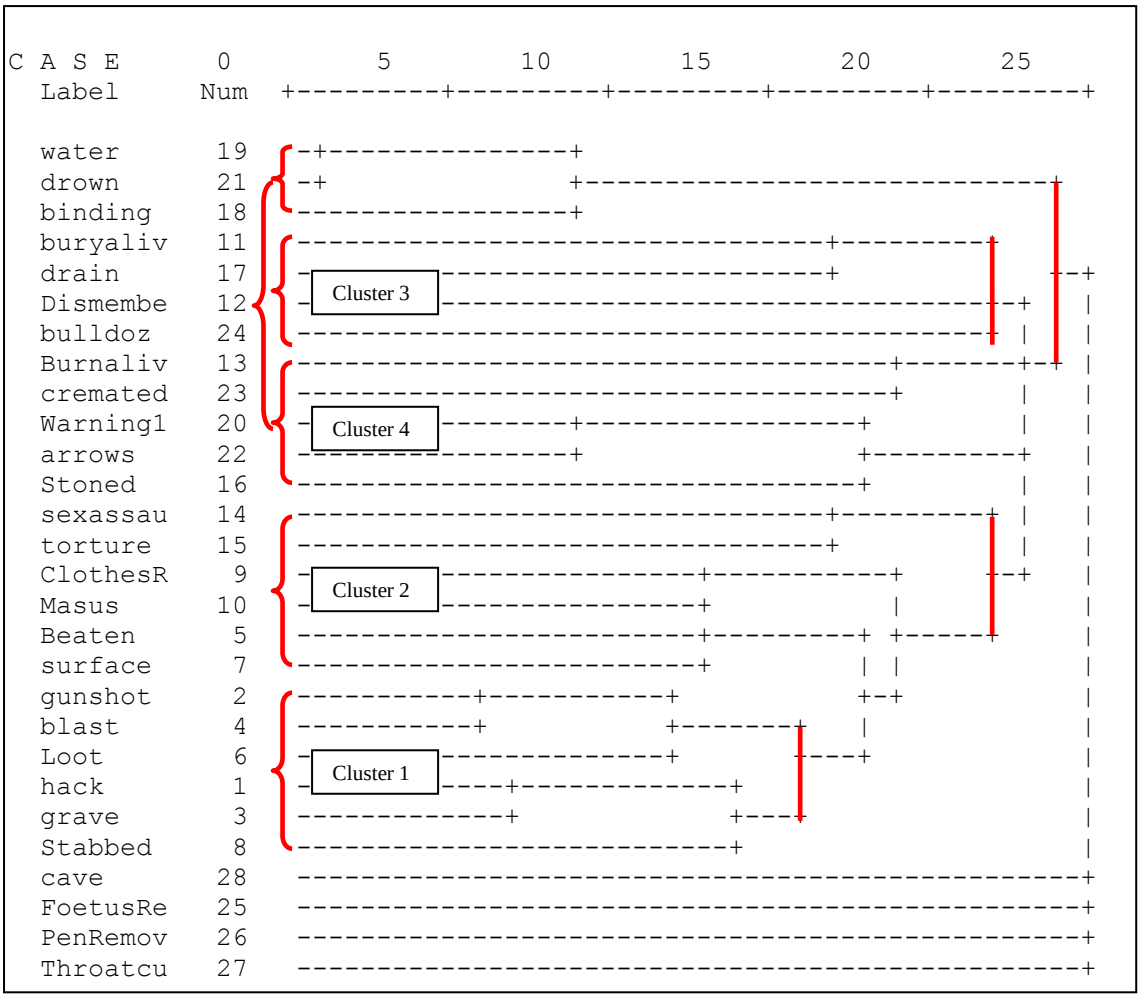

Figure 6.1 Cluster solution dendrogram of 28 Rwandan ground actions

6.4.1 Cluster Content

Using the agglomeration schedule and the dendrogram the variables forming each of the five clusters is shown in Table 6.3 and Fig. 6.1. Cluster 1 contains more of the higher frequency variables which would form the core actions of war crimes in Rwanda and it can be argued that the variables could be attributed to offenders likely to be implementing superior perpetrators orders. The actions suggest a conservative theme of offending because machete, grave burial and firearms have been linked to the organisation of the crime through historical accounts (Des Forges 1999), therefore likely to have been approved by superior offenders. This corresponds with findings from Cambodia and supports Hollows and Fritzon's (2012) theoretical rationale of the theme. Looting is also frequently referred to in literature (Kuperman 2001) but stabbing as a form of killing has been overlooked. It is probable that stabbing is derived from the use of machetes, but the adjective associated with machete throughout witness accounts has been hacked and stabbed has been referred to as a discrete action. In Rwanda the two different modes of killing were recorded because of the probative value in establishing if different weapons are employed by different offenders on the ground, this notion will

be examined further in the subsequent MANOVA chapter which aims to explain variances of behaviour.

Cluster 2 can be attributed to the integrative mode of offending because the torture and use of masus (club encased with spikes/nails) support the association with perpetrators likely to be psychologically disturbed and have an erratic manner (Fritzon and Canter 2001). In Cambodia torture was attributed to the conservative theme of behaviour and counters what is found in Rwanda. This demonstrates the need for contextual information to be applied to individual actions when determining the theoretical explanation for the theme. Torture was associated with conservative behaviour in Cambodia because of the systematic implementation of the method to extract 'confessions' from victims the Khmer Rouge accused of being enemies of the regime (Chandler 1999b). This was not the case in Rwanda because information extraction did not contribute to the regimes objective, which was to simply to eliminate a population group. Although torture has different connotations in both conflicts, rape and clothes removal have been classified as integrative behaviours in both Rwanda and Cambodia. This suggests that the underlying theory of the theme is same in both conflict location and supports the notion that ground actions can be consistently differentiated into themes.

Cluster 3 is the adaptive theme of behaviour because it includes bulldozer, drains and bury alive as forms of victim disposal, all of which are opportunistic and make use of resources. The same ground actions have been classified into this theme in Cambodia which again supports the theoretical assumptions attached to this mode of offending. It can also be inferred that these actions are central to defining the theme and the other actions within it could represent offender style or they are case study specific behaviour. This suggests that the core behaviours in each theme represent the sanctioned forms of violence, in which case subordinate offenders who do not participate in any core actions can be differentiated from those following orders. Having this information could assist the ICC in targeting the offenders most responsible for war crimes based on the range of actions the individual performs.

The remaining expressive theme can be applied to cluster 4 because the ground actions, stone, burn alive and arrow conform with the extreme physical attack and bringing a weapon to the scene criteria attached to the theme during serial murder (Salfati 2000). However, the disposal in water would fit better within the adaptive theme. Again the expressive actions here are comparable with Cambodia in that in both cases bringing a weapon to the scene forms part of the theme, although the type of weapon used appears to be case study specific. In Cambodia firearm was classified into the expressive theme but in Rwanda it is stones and arrows which perhaps represents the economic and cultural influence on the modes of offending, or that the weapons used are unique to the groups of offenders associated with the theme.

To contextualize and determine the theoretical significance of actions that do not support underlying assumptions of the theme they have been classified into, the relationship between it and all the actions within the sample need to be examined. Conclusions cannot be drawn from CA alone due

to the inability to draw of the qualitative aspects of a variables interaction with other variables outside the cluster, hence the use of SSA.

Again cluster 5 contains lower frequency actions that can be viewed as spurious or perhaps deviant actions because they have no relation with any other variables in the sample. The dendrogram in Figure 6.1 shows that individual variables do not form a cohesive cluster, but instead have been classified together during the final stage of the agglomeration process. The lower frequency means that the variables within this cluster will be omitted from SSA analysis because of methodological problems in examining actions that occur in <5% of cases. The omission of variables because of their frequency means that a sub-set of distinct but related forms of offending may be overlooked when using SSA alone. Again, this demonstrates the analytical value in using both CA and SSA so that all actions can be examined and inferences are made from a representative sample.

Cluster 1	**%**	**Cluster 2**	**%**	**Cluster 3**	**%**	**Cluster 4**	**%**	**Cluster 5**	**%**
Firearms	44	Rape	7	Bury Alive	10	Drown	4	Foetus Removal	3
Explosive	24	Torture	7	Drain	6	Water	5	Cave	<1
Loot	20	Masus	13	Dismember	10	Restrain	6	Penis Removal	<1
Machete	58	Clothes Removal	16	Bulldozer	3	Burn alive	9	Throat Cut	<1
Grave	31	Beat	22			Cremate	4		
Stab	16	Surface	19			Arrow	4		
						Warn	5		
						Stone	7		
Conservative		Integrative		Adaptive		Expressive		Deviant	

Table 6.3 Cluster classification of 28 Rwandan ground actions

6.5 Smallest Space Analysis

SSA was used to explore whether the ground actions classified into groups by CA form themes of behaviour. SSA was conducted using a multivariate data reduction procedure (SSA-1, Lingoes 1973) and carried out on the Hebrew University Data Analysis Package (HUDAP, v. 8). The methods and procedures associated with this method of data summarization are the same as those used to examine ground actions in Cambodia, see section 5.5 and 5.5.1 because the same processes apply here.

6.5.1 Data sample

The Rwandan ground actions extracted from 135 cases used in CA are also used in SSA (See Table 6.1 and 6.3). SSA uses the binary information of presence ‘1’ and absence ‘0’ to produce the multidimensional plot derived from an association matrix of Jaccard’s coefficients, whereby joint non-occurrence does not affect the relationships. Important given the nature of the sample and the fact

that it is not possible to determine that the absences of a behaviour does not mean it did not occur, it may just not have been reported.

6.5.2 Procedure

SSA was run with just 20 variables because no ground actions occurred in more than 90% of cases, but 20 out of the 28 occurred in less than 5% of cases and they were removed from analysis outlined below. For rationale of removing low frequency variables see Section 5.5.3.

6.5.4 Spatial plots

Figure 6.2 shows the three-dimensional solution of 20 ground actions following the exclusion of those occurring in less than 5% of cases. This solution has a coefficient of alienation of .07732 out of 30 iterations and is a suitable goodness of fit because the smaller the coefficient the better the fit (Canter and Heritage 1990). Therefore, theoretical inferences made about the structure of the can be reported with appropriate confidence. The three-dimensional plot reveals that the ground actions classified into groups during CA remain consistent in the SSA plot, that is, variables within to each cluster are visibly closer to each other in the geometrical space. As expected there is a high frequency central core of ground actions and lower frequency variables are on the periphery showing the underlying empirical structure to the plot. Examining this structure means that the high and low frequencies does not necessarily form themes but that they act as a range within distinct forms of offending.

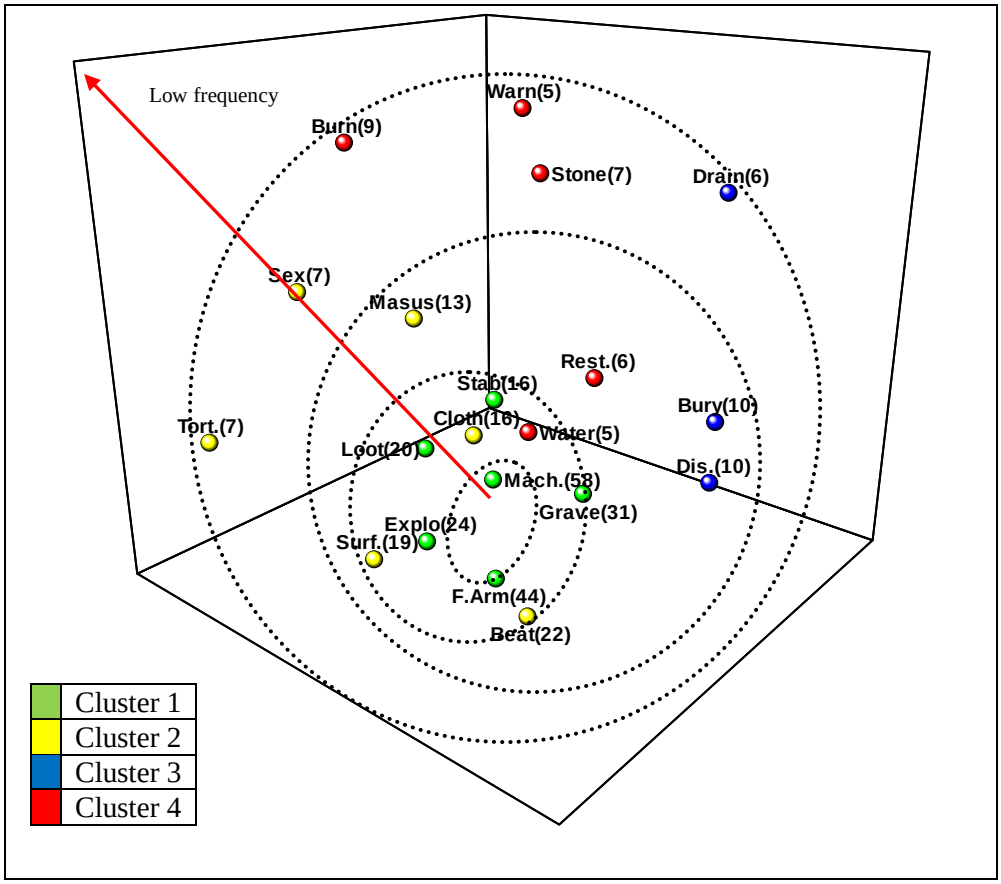

Figure 6.2 Three-dimensional SSA plot showing quantitative range of Rwandan ground actions

Figure 6.3 is the two-dimensional solution and has a coefficient of alienation of .13765 out of 34 iterations and also indicative of a suitable goodness of fit. This solution was used during the partitioning process because it technically easier to partition and visually easier to interpret. It is worth noting that when comparing Figure 6.2 and Figure 6.3 the positioning of the variables within the space change, this is due to the reduction in the dimensional planes shift the variables to best fit the two-dimensional space. Similarly to Cambodia's SSA plot, this shift in position does not affect the interpretation of the plot as all dimensions of the plot have been examined before deciding on the most suitable partition of the space.

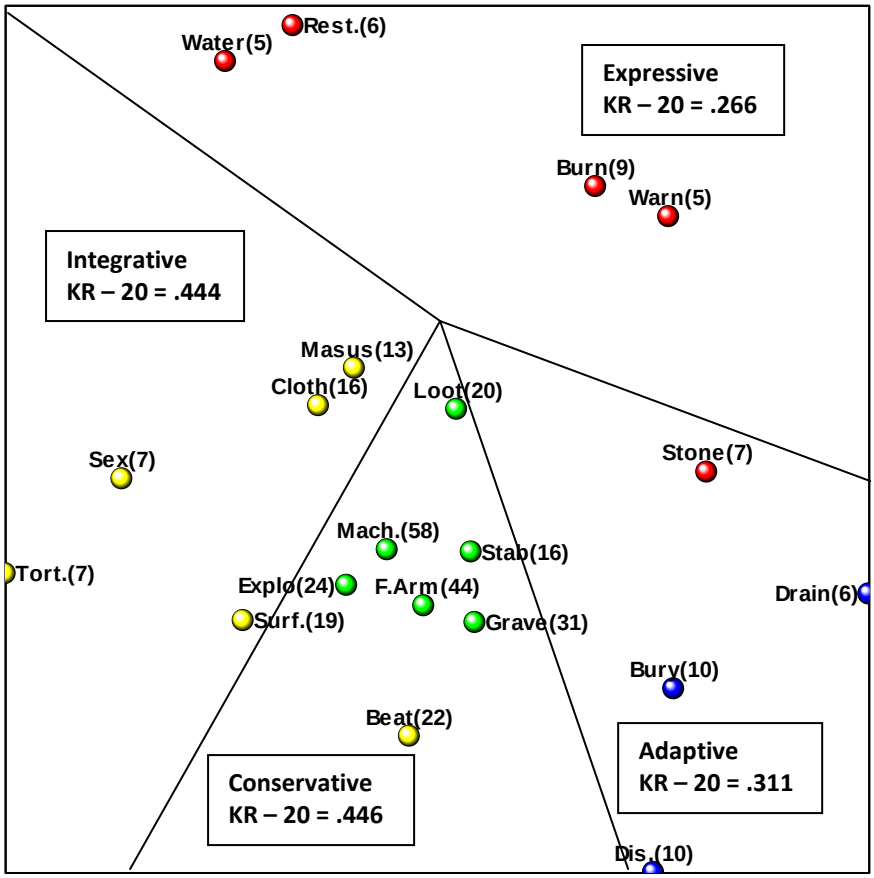

Figure 6.3 Two-dimensional SSA plot showing themes of war crime behaviour in Rwanda

6.5.5 SSA plot partitioning

The partitioning of the SSA plot into themes of behaviour was carried out within the two-dimensional plot (Fig. 6.3) subsequent to establishing the empirical structure of the sample in the three-dimensional examination. Each point in the spatial plot represents a ground action specifying the mode of killing, disposal and victim interaction across 135 cases. It was hypothesised that the classified groups of variables would be partitioned into the conservative, expressive, adaptive and integrative themes identified within Hollows and Fritzon's (2012) study and the Cambodia sample (Chapter 5). The fifth cluster identified through CA was omitted from SSA because it was comprised of ground actions that occurred in the less than 5% of cases. The partitioning of the plot was achieved by examining the proximity of the variables, their semantic similarities inferred through literature and knowledge gained from the data collection. Subsequent to visually partitioning the plot using prior knowledge the regions were examined using Kuder-Richardson 20 (K-R20) in SPSS v. 17 to test the internal reliability of each theme and refine the partitioning of variables on region borders. If internal reliability was greater with the variable included then they were attributed to that particular theme.

6.5.5.1 Internal Consistency

The internal consistency of all the hypothesized regions in Figure 6.3 was weak, all values were below .05. The most consistent was the conservative region with a value of .446, followed by integrative = .444, adaptive = .311, and the least consistent was expressive with a value of .266. The low internal consistency could be attributed to the number of lower frequency variables, as well as the actual number of variables within the theme (Hakkanen *et al*. 2004). The examination of these themes of behaviour within the Cambodian sample revealed the same issues. The expressive theme was the most consistent region in that study but it only had two variables, whereas in Rwanda there are at least four variables per region. The increased number of variables within the conservative theme may account for its better internal consistency because of the probability of each of the variables co-occurring would be markedly higher. The variable and sample validity also applied here because the type data and the manner in which it was collected is the same for both studies (see Section 5.5.6.1).

The Rwanda SSA plot is also comparable to Cambodia in that gaps exist within the space. In Fig. 6.3 the majority of the variables are positioned in the lower portion of the space. This too is indicative of an 'eccentric radex' that can arise through the omission of a sub-set of offenders or type of offending (Canter and Ioannou 2004). The eccentric radex of the Cambodian plot (Fig. 5.3) was attributed to the omission of verbal forms of behaviour, or actions that could not be effectively recorded because of the inconsistency in how the information was reported, for example, transport to disposal location after killing event. The fact that both Cambodia and Rwanda present eccentric radexes supports suggests that future research should include verbal actions and an improved method of data collection for inconsistent behaviours, and perhaps produce a more representative model of behaviour.

It has been suggested that the internal consistency problem could be resolved through the reduction of the number of regions (Alison and Stein 2001), however as demonstrated in the Cambodia study when regions were merged to examined the victim relationship model of Canter (1994) the increase in K-R 20 values when the plot was partitioned into three regions was unremarkable (See Fig. 5.4). Consequently, in this study the four hypothesised regions will be examined using the knowledge gained during data collection, theoretical information derived from Hollows and Fritzon (2012) and serial crime offence behaviour, as well as the findings from the examination of ground actions in Cambodia (Chapter 5).

6.6 Themes of war crime behaviour

6.6.1 Conservative

The conservative theme of the SSA is the most consistent region and contains more of the higher frequency variables, such as Machete (58%), Firearms (44%), Grave (31%) and Explosives (24%). These actions support the assumptions that the actions reflects logistical and practical support Hollows and Fritzon (2012) and Cambodia (this study) because machetes and firearms were

distributed to subordinate offenders (Des Forges 1999) therefore the use of these weapons forms a link to the superior perpetrator. It is worth noting that the use of explosives also forms part of this conservative theme, yet it has been overlooked in historical references to the forms of violence used in Rwanda as most refer to the use of the machetes. Knowledge that explosives are being used within the same range of actions further supports the planning and co-ordination theory attached to the theme because the cost and access to explosives in a developing country such as Rwanda requires the superior perpetrator assistance. This contrasts with Bosnia where the use of explosives falls within the integrative theme because the damage can inflict psychological stress (Hollows and Fritzon 2012). The different emphasis of actions demonstrates the need to take into account the context in which the war crime is takes place. Bosnian actions can be interpreted differently because of the economic and political climate meant access to explosives would have been easier. From an investigative perspective it can be argued that analysis and the subsequent results used to contextualise the offence should be performed for each different conflict location and perhaps an overarching model of war crime behaviour would be inappropriate.

Looting (20%) is not overtly indicative of the conservative theme and arguably better suited to the adaptive theme as offenders make of the most of their environment and exploit opportunities for personal gain. However, Cohn and Rotton's (2003) examination of crime rates over holiday periods deem looting as an instrumental behaviour, which can be encompassed into the conservative theme (Hollows and Fritzon 2012). In Rwanda looting can be a conservative behaviour because offenders took land, cattle and houses from their neighbours to prevent re-habitation (Melvern 2004), therefore enforcing life limiting measures and satisfying the Rome Statutes definition of war crimes. This action is not comparable with artefact or clothing removal because looting removes group identity and the ability to return home after the conflict has ended. In the Bosnian action model instigators in the conservative theme are said to give orders for the destruction of private and religious property (Hollows and Fritzon 2012) which also supports the classification of looting into the conservative theme. Linking these material elements of the crime to superior offenders connects the physical evidence to those removed from the physical act, a connection which has probative value to the ICC. This is because the ICC can focus their investigation of this particular suite of actions to build a case against selected individuals.

6.6.2 Integrative

The integrative theme is the second most consistent region of the SSA plot with a K-R 20 value of .444 for the 5 variables within the region. In CA Beat (22%) was classified into the same group of variables, but the K-R 20 value decreases if included in the region in SSA therefore beat has been shifted to the conservative theme. Clothes Removal (16%), Masus (13%) and Sex (7%) support the integrative mode of offending because the action can be individually focused with expressive components (Canter and Youngs 2010). These same actions have been classified as integrative in

Cambodia (See Fig. 5.3). Sex (including rape) certainly supports the idea that integrative behaviour reflects a threatened ego (Baumeister 1997) and offenders use sexual gratification to overcome this. However there is an added theoretical component to rape during war crimes, that is, the functional role that can be applied to the action. The functional role is that the action prevents the population targeted for elimination from reproducing, and contributes to the destruction of that group which goes beyond the integrative/expressive theme and is why rape alone is recognised as a war crime (ICTY, Prosecutor v. Kunarac, Case No. IT-96-23-T & 23-I-T). Limiting a population group from returning is conducive with the conservative mode of offending because the action would have been endorsed by superior perpetrators in order for it to be performed on scale wide enough to have a limiting effect. Rape may not be positioned within the conservative region because of variable validity. Rape and sexual assault was only recorded if it occurred in instances when the victims were killed, and given the low lethality of rape as a standalone form of violence its relationship to other behaviours may be misrepresented in the sample. Nevertheless, the action has a probative value because it co-occurs with particular killing actions more than others in the sample. This connection can therefore be used to differentiate between subordinate offenders who use rape as a weapon from those who use it for the personal gratification, and develop a model the ICC can draw from to infer individual culpability. The classification of sex in this study is also considered to be integrative rather than conservative because of the variables proximity to torture (7%) in the space. This relationship supports the idea that sex in this Rwandan sample does not reflect the functional element of the action but instead the expressive, because offenders are using the action in more often with tortuous behaviour which is indicative of personal gratification and gain, rather than following an instruction. This notion is further supported by actions attributed to this theme of offending in Bosnia where the integrative theme included torture and psychological abuse (Hollows and Fritzon 2012). The use of a masus (club with sharp projections) and surface disposal (19%) of victims also conforms to the expressive and sadistic attributes of the theme. Using a masus here is considered torturous because the weapon has no practical function other than to inflect pain on the victim, other weapons such as machetes and clubs primary function is agricultural tool and killing is secondary to the purpose of their existence. When examining the function of surface disposal during war crime activity in Rwanda media coverage showed that large numbers of victims were left in the streets where they were killed, and this had a major psychological impact on the remaining Rwandan population (Thompson 2007). Again this rationale can only be presented subsequent to knowledge of the context in which the activity is performed, which highlights the importance of developing multivariate models of war crime activity across more than one case study. This will contextualise not only events in Rwanda but enable the ICC to compare crimes in other conflict locations to form a more representative view of offence behaviour. Although the ground actions within this theme do not have a high internal consistency value, they do fit with the theoretical assumptions associated with the integrative mode of offending.

Furthermore, some of the actions in the region are the same as those classified as integrative in Cambodia which supports the notion that war crimes can be conceptualized in a consistent manner.

6.6.3 Adaptive

The adaptive theme of behaviour has been the least consistent in both Bosnia and Cambodia and the internal consistency is also low in this study with only the expressive theme following. The partition of this region in Fig. 6.3 contains four variables three have been classified into a single cluster in CA but the stone (7%) ground action, attributed to the expressive theme in CA has been encompassed into this adaptive mode of offending. The inclusion of stone is the result of an improved K-R 20 value, bury alive (10%), dismember (10%) and drain (6%) form the remainder of the region. Adaptive behaviour in the context of war crimes is said to reflect a management role through providing orders, encouraging subordinates, indirect actions and frontline actions (Hollows and Fritzon 2012). Without drawing on the behaviour of superior offenders in this study it has to be assumed that the ground actions in the SSA region still reflect these criteria. Stone for example would be a frontline action according to collections of witness testimonies collated by Mamdani (2001) stoning was used as the first form of attack on large groups of victims, often to hold victims at a location until interahamwe arrived with lethal weapons. This form of organisation can be reflective of the management role in that a large scale attack occurred in stages, civilians and interahamwe used primitive forms of violence to control the situation until trained interahamwe and soldiers arrived, and employ more lethal force. Bury alive and drain conform with the assumption that adaptive behaviour is reflective of the adaption, exploitation of environment and the situation for the offenders gain, and offenders may change behaviour during the crime (Fritzon and Canter 2001). The use of drains to dispose of victims is certainly indicative of using what is available in the environment, as does burying alive whereby victims are wounded and thrown into latrines to die. However, dismembering of victims does not have a clear relationship with the conceptual meaning of the theme, and perhaps better suited to the expressive theme because of the extreme nature of the violence. This weak theoretical relationship is reflected in the physical positioning of the variable on the periphery of the space, which can be indicative of unique behaviours (Canter and Wentink 2004). If the action does not co-occur with many of the actions within the region then the relationship will be poor. The uniqueness of this action within the theme may be the result of a sub-group of offenders within the theme who are not influenced by peer pressure, or the influence of superior leaders. Offenders participating in this type of action may not be a priority for ICC investigations because they are not representative of the most responsible offenders the courts seek to prosecute.

6.6.4 Expressive

The expressive mode of offending is the least consistent with a K-R 20 of .266, whereas in Cambodia it was the most consistent albeit with a poor value of .458 and comprised of just two

variables, which can account for the elevated K-R value (Hakkanen *et al*. 2004.). In Rwanda the expressive theme is composed of four variables, the fifth variable, stone, was allocated to the group during CA has been shifted to the adaptive mode of offending due to K-R 20 values. Burn Alive (9%) does conform to the characteristics of expressive behaviour but restrain (6%), warn (5%) and water (5%) do not reflect the sadistic and extreme physical attacks associated with the theme (Salfati 2000). The sadistic elements of these actions can only be derived from the context in which they are performed, and the inferences to inhumane and humiliation (Hollows and Fritzon 2012) aspects of the activity. The inferences may be drawn from verbal actions of perpetrators, but they have been omitted from this study, hence the eccentric radex. Nonetheless disposal in water and restraining of victims can be indicative of inhumane treatment because witness testimonies collated by Totten and Ubaldo (2011) state victims were publically walked to the location, bound and thrown into the water and others specify that victims had their hands tied to prevent them from swimming when thrown in. In another example an individual was enclosed in a tank filled with water which was gradually heated and the victim's head forced to stay under the water. Both examples demonstrate the expressive elements of the ground action and supports the classification into the theme. Warning also supports the attributes of the expressive mode because contrary to the assumption that a warning is beneficial to the recipient, in Rwanda playing musical instrument, blowing horns and drums were used to alert victims of offender approach and intimidate them. It is argued here that warning and its intimidation component is viewed as sadistic because victims were taunted, and have to decide whether to attempt escape, which identifies them as belonging to the targeted group, or they wait to be killed. It is probable that offenders performing these types of actions are not implementing the instruction of superior offenders as their activities go above and beyond what is necessary to killing victims in some instances. The sadistic elements of their actions could imply that some offenders may use the cover of mass violence to satisfy personal violent fantasise. The ICC again can use this form of offending to determine the individual culpability of a subordinate offender, because if an individual offender's actions only fall within this theme then it is unlikely that they are following instructions or orders, therefore their activity would not be prioritized for investigation as it would not contribute to demonstrating the knowledge and intent of offenders complicit with the overall war crime offence. The inferences made from these variables could not have been formed without knowledge of the sample and why the qualitative aspect of SSA is beneficial in drawing upon contextual information, whereas quantitative examination alone hinders this perspective. Which is why it is argued that the ICC would benefit from case study specific analysis to extract the most accurate and effective interpretation of the material element of war crime activity.

6.7 Victim Model

As was the case in Cambodia partitioning of the ground action in the SSA plot can be examined using Canters (1994) model of the role the perpetrator assigns to the victim during the crime. Fig 6.4 shows that modes of offending are comparable to the victim as person, object or vehicle. Actions classified as conservative reflect perpetrators who view their victims as a person, adaptive offenders would view victims as vehicles, and actions classified as expressive and integrative view victims as object. The same comparisons can be found in the Cambodian study (See Section 5.7), but some of the actions classified into the respective modes of offending have different connotations in Rwanda. The different theoretical connotations of each individual action have been addressed throughout the rationalization of partitioning the ground actions into themes of behaviour in both locations. Actions including firearms, victim restraint and surface disposal have different conceptual meanings in the respective locations because of the context in which they are performed. That is the historical and political connotations attached to the behaviour for example, the use of firearms in Rwanda has a more political significance because of their distribution by the government just prior to killing taking place (Des Forges 1999). This inexplicably links the action with superior offenders, the same connotations cannot be made in Cambodia and hence the differing emphasis of the actions when conceptualizing war crime. Nonetheless the modes of behaviour can still be linked to the how the ordinary offender perceives their victims, and this information can in turn be used by the ICC to infer the knowledge of performing acts conducive to war crimes.

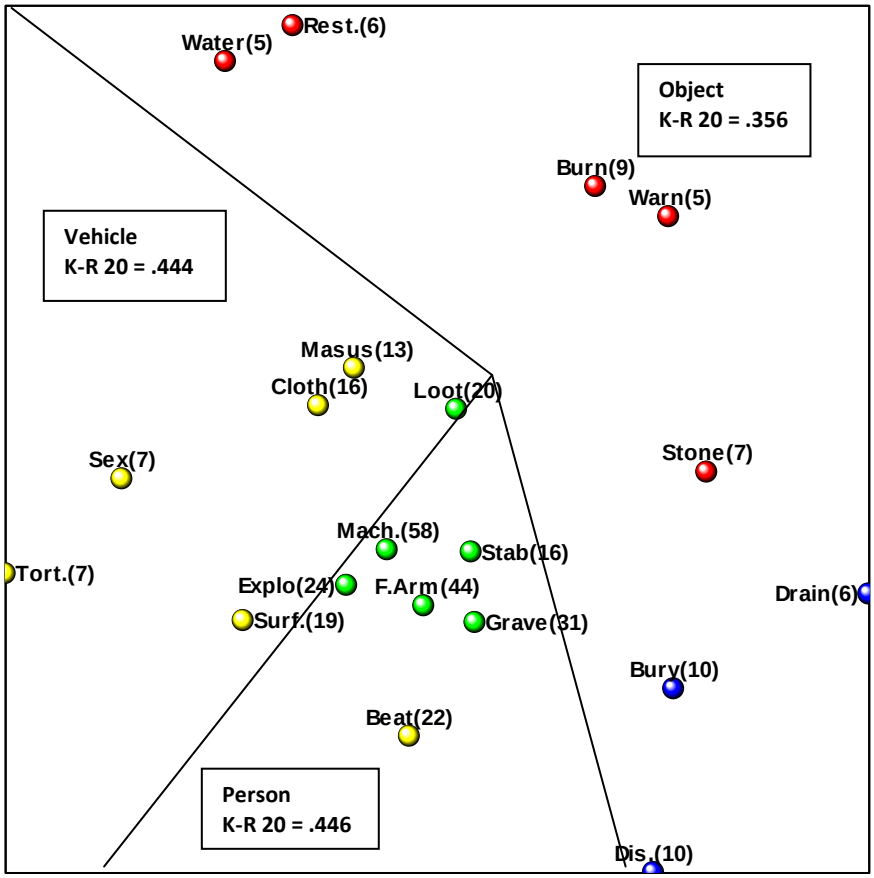

Figure 6.4 Two-dimensional SSA plot showing perceived role of victim

6.8 Implications of findings

This chapter examined the ground actions of subordinate offenders participating in war crimes in Rwanda comparing findings with subordinate offenders in Cambodia and superior offenders in Bosnia. The partitioning of the SSA plot for Rwanda actions, like Cambodia suffered from poor internal consistencies but showed that ground actions associated with war crimes can be split into conservative, adaptive, integrative and expressive themes because all modes can be identified in both studies, and this support the findings from the examination of perpetrator behaviour in Bosnia (Hollows and Fritzon 2012). However, only three ground actions are consistently classified into the same themes across the three studies. Beat and grave disposal ground actions are both classified as conservative forms of offending, whilst sex is integrative in both locations as well as in Bosnia (Hollows and Fritzon 2012). The classification of all other actions are case study specific and rely on cultural, historical and demographic knowledge of each country to justify their classification, also ground actions cannot be directly compared to Bosnia because the nature of the variables are different in that study. Having one ground action repeatedly classified into the same mode of offending across three different studies suggests that the behaviour exemplifies that theme. Sexual violence and rape can be found in the integrative theme in all three studies which implies that offenders exhibiting this offence action can be consistently classified. Although not part of the conservative theme of offending

linked to superior offenders, a focus of the ICC, sexual violence is an important form of violence in the context of war crimes and is specifically referenced in the Rome Statute as an action that breaches international law (UNGA (1998). Rome Statute. UN Document A/CONF.183/9 Article 7. Para. 1). According to Hollows and Fritzon (2012) Bosnian offenders who were more likely to have provided political support to the government regime would be less likely to participate in sexual assaults, or use a gun. From a ground action and subordinate offender perspective this suggests that an offender participating in sexual violence is unlikely to be conforming to the conservative mode, and therefore not adopting superior offender instructions. This one action could be used by the ICC to determine the level of participation in a war crime, that is, subordinate offenders who go beyond the types of violence to destroy a population group, or the subordinate offender who does just enough to achieve the objective set by the superior. It can be argued that the subordinate offenders conforming to the conservative theme of behaviour are likely to perform actions because it is their duty (government forces) and may be participating in the crime under duress, hence the comparison to victim as person within this theme. Duress is one of four defences recognised by the Statute (UNGA (1998). Rome Statute. UN Document A/CONF.183/9 Article 31. Para 1.), therefore offenders participating in sexual violence during their war crime activity could invalidate the following orders defence to mitigate charges and sentencing. The ICC can then prioritize the investigation of actions most effective in inferring the intent of the superior offender, and culpability of the subordinate.

The beat and grave disposal ground actions have been found in the conservative theme in Rwanda and Cambodia which again implies that offenders could be classified as conservative offenders if they are found to participate using either of the actions. Subordinate offenders performing these actions, perhaps under duress, are may have had knowledge that their actions formed part of a war crime because they are supporting widespread methods of destroying a population group. The demonstration of knowledge is central to crimes against humanity convictions, one of the crimes encompassed by the overarching war crimes term, because the acts are committed "as part of a widespread or systematic attack directed against any civilian population, with knowledge of the attack" (UNGA (1998). Rome Statute. UN Document A/CONF.183/9 Article.7. Para. 1.). This means that subordinate offenders participating in this manner still fall under the mandate of ICC investigations, and determining that their individual behaviour complies with implementing a war crime using the empirical models devised from this study can contribute to their prosecution.

Linking grave disposal to subordinate and superior offenders solidifies the probative value of the action within the international judicial process. The action of disposal may be consistent across two distinct locations, but the evidence within the grave is likely to be location specific given the different killing actions associated with conservative modes of offending in each case. Therefore, knowledge of location specific patterns of behaviour can help focus the forensic investigations of graves which may have otherwise been overlooked. For example, in Rwanda the stab ground action is associated with grave disposal within the conservative theme. This action has not been referenced in

literature, yet its use could be linked to superior offenders because it falls within the conservative region. Knowledge gained from this study could inform those exhuming mass graves to be aware of evidence of stabbing. This is important because evidence of stabbing from human remains can be missed due to decomposition and the low probability of the weapon hitting bone (Banasr *et al.* 2003) so additional focus from investigators is required. This form of violence has not been widely discussed in literature or historical accounts, yet it has been reported in 16% of cases through witness accounts. Subsequently, being able to physically identify actions and confirming witness accounts could prevent perpetrators from offering alternative theories to explain victim deaths that counter the accusations of war crimes, for example conflict casualties.

Overall findings from both CA and SSA suggest that war crime ground actions performed by subordinate offenders in Rwanda may be differentiated into four themes of behaviour. The results are comparable with themes of behaviour identified in Cambodia, as well as Bosnia (Hollows and Fritzon 2012). The same four modes of offending have been identified as conservative, adaptive, integrative and expressive. Although a few actions can be classified into the same themes in each case study the majority of actions are classified in a manner unique to each location. This suggests that war crimes cannot be conceptualized using a single model but is best achieved by exploring activity at location specific level. In which case the ICC must tailor evidence collection strategies and produce appropriate baseline knowledge of the material elements of war crimes.

6.8.1 Considerations

As previously discussed only three variables found in Rwanda, Cambodia and Bosnia could be classed into the same themes of behaviour, all remaining actions are classified into different regions in either study. The inability to replicate classification of variables in Rwanda and Cambodia could be attributed to the cultural, demographic and historical difference between the locations. This can also apply to Bosnia, but with the added factors of different test subjects and type of information analysed, perpetrator interview rather than witness testimonies. This phenomenon could also be explained by the nature of war crimes as an offence in itself. War crimes can be more complex than domestic crimes because the actual offence is produced out of accumulating and systematic activity. It requires an abundance of individual offenders operating within multiple groups, including soldiers, militia and civilians, all of which contribute to the overall crime. Each individual offender and offender group may have a distinct mode of offending so there can be variation across individuals and groups, as well as variation between offenders within each group producing a complex offender and action framework. Furthermore, not all offenders wish to contribute to the war crime itself, but instead have ulterior, perhaps personal objectives, and their actions add to the complex mix. This may account for the inability to classify variables into hypothesised regions and perhaps the poor internal consistency of the SSA regions in both study locations. The following chapter will set out to examine

if perpetrator type does have an effect of the mode of offending and perhaps explain the variances of behaviour along with location and the time in which events take place.

Chapter Seven
Analysis of Variance

This chapter will examine the expressive, adaptive, integrative and conservative themes of behaviour to determine if modes of offending are affected by the situational factors of time, location and perpetrator type. This chapter will examine differences in behaviour using Multivariate Analysis of Variance (MANOVA) to develop upon the empirical models of ground actions in Cambodian and Rwandan analyses. This will add to baseline knowledge of war crime behaviour and aims to identify areas of probative value for the ICC investigations. Establishing what factors influence the types of ground actions performed will enable the ICC to tailor evidence collection strategies and assist in the recovery of evidence of the war crime, corroborate witness accounts, or guide interviews of perpetrators and witnesses to maximise information recovery.

7.1 Introduction

Cluster Analysis and Smallest Space Analysis of ground actions in Cambodia and Rwanda have identified four themes of offending that can conceptualize the material elements of war crimes. These findings support the action model of perpetrators indicted for genocide in Bosnia (Hollows and Fritzon 2012) but the types of actions attributed to the themes in each case study are different. The differences could be the result of different types of offenders sampled. In Bosnia offender behaviour was extracted from "most responsible" perpetrators as evidenced by their indictment by the ICTY but this study relates to the ground actions of subordinate offenders. It is argued that their manner of participation will differ and this issue has been addressed throughout CA and SSA analysis. Just as offender type may account for difference in behaviour expression across study samples, offender type may also account for difference of behaviour within a case study, that is, whether a soldier will perform a range of action that is distinct from a policeman or militia. This chapter set out to determine if the differences in subordinate behaviour identified from ground actions can be attributed to the different groups of offenders. Being able to attribute a particular form of offending to a specific type of perpetrator can assist the ICC in prioritizing their indictments of more appropriate offenders. For example if it can be determined that militia are more likely to perform conservative forms of offending, then using the empirical models of from the previous chapters it can be suggested that the actions of those specific offenders best reflect the intentions of the war crime planner and instigators, the offenders the ICC consider to be most responsible.

Another factor that could account for the differences in behaviour expression is the location of the killing, it has already been established that the types of ground actions used during war crimes are unique to the geographical location of the case study. Therefore it is assumed that there may be regional differences of behaviour expression within each of the case study locations. As the study by Verwimp (2006) shows in the Kibuye Province of Rwanda, young male victims in that region are

more likely to be killed by firearms soon after the genocide commenced. This finding also implies that the time in which a war crime offence occurs could account for the variances of behaviour expression. The implications of Verwimp's (2006) results has on this study is that firearms are associated with the conservative mode of offending, therefore if the ICC was provided with the time and location of an offence then an additional evidential link would enable investigators to connect the actions of the subordinate offender to a superior offender who governed that region at that time. From a forensic investigation perspective knowing that time and location can be linked to particular theme of offending the individual ground actions within that theme can be the focus when gathering crime scene evidence. The gathering of this information can be subsequently used to suggest a timeframe in which victims were killed which triangulates evidence, corroborates chains of events and can help determine who may be responsible. Being able to determine that behaviour expression can be effected by these factors adds to the practical application of empirical models of war crime behaviour and demonstrates the value in forming baseline knowledge of offence behaviours.

7.1.1 Theoretical assumptions

Investigative Psychology studies that examine behaviour expression, and its consistency, wish to determine if offender behaviour remains the same over time, or that offence behaviour can be linked to offender characteristics (Crabbé *et al.* 2008). The importance of knowing if offender behaviour is consistent stems from the idea that the characteristics of an individual can be reflected in how they carry out crimes (Canter 1994). This theory has been used by investigators to assist in narrowing the range of possible perpetrators and link cases likely to be attributed to the same offender (Sorochinski and Salfati 2010), but results from studies have been inconsistent. Mokros and Alison's (2010) examination of 100 rapists to determine if background characteristics were consistent with the behaviours they express showed no evidence of homology. Lack of homology was also evident in arson and robbery (Doan and Snook 2008). This is not surprising because of external factors such as environment, victim interaction (Canter and Heritage 1990) and offender learning (Canter and Young 2003) can force an offender to alter what they have planned. However, behaviour consistency has been identified when researchers examine behavioural themes, rather than individual crime behaviours. Studies of serial sex offenders found that subsequent to forming domains composed of behaviours relating to aspects of sexual assault, perpetrators consistently performed behaviours within the same theme (Grubin *et al.* 2001). In fact the control theme of behaviour proved to be the most consistent form of behaviour across the crimes, whereas style was the least consistent (Grubin *et al.* 2001). In Bennell and Canter's (2002) examination of serial burglaries there was less evidence of behavioural consistency across the crimes. This was attributed to the nature of the offence itself as burglary is more instrumental and planned, whereas rape and sexual assault is considered more expressive and subject to changes. Although Salfati and Bateman's (2005) assessment of consistency

across serial murders determined that the expressive theme was more consistent but in general consistency across the crimes was not reliable.

It is clear from the contradictory findings of these studies that external factors can have an impact on behaviour expression and highlights the complexity of the task of explaining the nature of war crimes especially when the offence is the culmination of the behaviour of thousands of perpetrators. This is why multivariate models are beneficial in providing the contextual baseline against which the actions of individual offenders can be compared. One feature derived from the studies of individual offender behaviour is that it can be more consistent under certain conditions. In the case of rape numerous studies have discovered that the there is a relationship between offence behaviour and geospatial factors, for example offenders are more likely to target their victim within a certain distance from where they live (Berenson and Appelbaum 2011). This assumption can be transferred to war crimes because it can be suggested that subordinate offenders in close proximity to the organisational hub of the superior perpetrator would probably exhibit behaviours consistent with the conservative theme. This point is supported by the findings of Verwimp (2006) who indicated that the use of firearms in the Kibuye Prefecture is location specific, that is, the form of killing was more likely to occur in the north of that region. Although this suggests that geospatial factors exist in Rwanda Verwimp (2006) only focused on firearms and machetes, no other forms of violence and the study was restricted to just one prefecture out of twelve. This study will examine all modes of killing and disposal, classified into themes of behaviour to determine if all forms of offending are affected by location. This will help to establish the how offence behaviour relates to the proximity to the administrative centre of the regime, because differences in behaviour expression away from the hub can have evidential value when investigating the crimes of superior offenders operating out of that location.

Another factor that could contribute to behavioural expression is time. An offender can develop and mature over time as they learn new behaviours and more efficient strategies to effectively carry out their crimes (Canter and Young 2003). Furthermore, a perpetrator's criminal objective may change over time (Grubin *et al.* 2001) and thus affect their behaviour. They can change from expressive to instrumental behaviour as they become experienced, for example, during serial murder, what may begin as an emotional response killing could over time develop into a more strategic killing involving calculated decisions and behaviours. Also the scale of violence can increase over time, a phenomenon that is present across serial rape (Warren *et al.* 1998). This escalation in violence may be apparent during war crimes in light of the stages of genocide proposed by Stanton (1998). These stages cover the escalation of events that lead to eventual massacres and extermination of a population group, having started out as actions of classification, dehumanization, organization and preparation. This piece of research only deals with the actions associated with massacres and extermination, but aims to use the empirical models to make inferences about the classification, dehumanization, organization and preparation and develop evidential links to offenders who implement that these

stages. It is the subordinate offenders who perform the final two stages and therefore examination of the their ground actions are the culmination of the efforts of the superiors implementing the prior stages, yet there has been no comprehensive of research in this area, as research gap this study aims hopes to address.

Individually time, location and perpetrator type could have an effect on behaviour as outlined above, so too can the different combinations of these factors. If time and location has a significant relationship with the conservative theme of behaviour inferences can be made about the organisation of the crime. For example, if conservative behaviours are more likely to occur during onset of the crime, and close to the administrative hub, then it is probable that plans originated there rather than multiple, sporadic centres of violence. Thus developing knowledge of how events occurred and providing the ICC with means of focusing the investigation by suggesting that perpetrators operating within that location, at that time, are the most responsible perpetrators. Additionally, knowing which ground actions form the theme of behaviour can assist forensic experts in deciding what forms of evidence to look for and record that may have otherwise been overlooked, for example stabbing. This action forms part of the conservative theme of behaviour in Rwanda yet it has been overlooked as a method of violence with evidential capacity. On the other hand if expressive behaviours are more likely to occur on the periphery of the governmental stronghold towards the end of the crime it could indicate personal gain, which can lead to arguments of offenders operating within this context falling within the mandate of the ICC because they may have been using the cover of violence for personal objectives rather than performing acts conducive with the war crime offence. The combination of all of these factors and the evidential inferences that can be formed as a result could have an impact on ICC proceedings. The empirical models will provide a comprehensive baseline of war crime behaviour investigators can draw from not only to make informed decisions about individual culpability, knowledge, intent and responsibility but to assist forensic investigators to priorities field of search for the most appropriate evidence to assist in prosecutions.

7.2 Method

Analysis of Variance (ANOVA) shows the interaction between multiple independent variables and the effects these interactions have on the dependent variable (Field 2005). In this study the situational factors of time, location and perpetrator type are the independent variables (IV), how these affect behaviour is the focus of the chapter. The same IV's are used in Cambodia and Rwanda case studies as are the dependent variables (DV) of conservative, integrative, adoptive and expressive behaviour themes. Due to the multiple DV's it is necessary to explore how each IV affects behaviour as well as affect of the different combinations of IV's because perpetrator type and location have more of an effect on behaviour than location alone. To examine all the interactions Multivariate Analysis of Variance (MANOVA) is used because it enables the exploration of all IV's and DV's simultaneously (Rumsey 2007) therefore all relationship between variables and the individual factors

within the variable can be examined. When dealing with multiple IV's and DV's MANOVA is the preferred method of analysis instead of one way ANOVA for each behaviour theme against each situational factor. This is because it does not allow for examination of how the situational factors have a combined effect on behaviour, and running multiple one-way ANOVA's increases the risk of a Type I error (Tabachnick and Fidell 1996).

7.2.1 Sample

Data from Cambodia and Rwanda is analysed simultaneously in this chapter because both contain Conservative, Expressive, Integrative and Adaptive themes of behaviour and have the same situational factors. Only the themes of behaviour formed through the radex partitioning in SSA are used in MANOVA because qualitative and quantitative information was considered in their formation and therefore most likely reflect the best classification of ground actions. The time, location and perpetrator type IV's are described in depth in Chapter 3. These variables were selected on the basis of the probative potential in establishing that they can have an effect on behaviour and also because of the findings by Hollows and Fritzon (2012) and Verwmip (2006) who suggest that these factors influence behaviour. All the IV and DV variables stem from witness accounts of killing events in both locations and the subsequent detected behavioural themes. The details of data collection, recording and limitations are outlined in Chapter 2, 3, 5 and 6. The number of cases in Cambodia (159) and Rwanda (135) were reduced in MANOVA because no situational factors were recorded in some cases and therefore could not be used during MANOVA. Some cases did have situational information but the ground actions associated with the case fell below the >5% threshold for inclusion in SSA and therefore were also omitted from MANOVA analysis. MANOVA was performed using SPSS v. 17 and included 152 cases from the Cambodia sample and 127 cases from Rwanda.

7.2.2 Dependent variables

Prior to running MANOVA the categorical information was transformed. MANOVA assesses the amount of variability of the dependent variable based on the change of its mean value in response to the independent variable (Rumsey 2007). To explore if behaviour is affected by the situational variables a mean value of each mode of offending needed to be obtained. The categorical information in this study was recorded in a binary format therefore a mean value could not be obtained because the dichotomies referred to the presence or absence of an individual action rather than a numerical output that can be measured. Consequently, the information in each behavioural theme required transforming into a numerical format so that a measurable mean value could be produced.

Transforming binary data to empirical information was accomplished by tallying the presence of each action within a case and assigning the case to one of the four behaviour themes. A case is labelled as conservative or expressive etc depending on the number of actions associated with that theme of behaviour. The frequency of actions in each of the four themes was calculated as ratios and

recorded as a percentage, enabling a mean value of each theme to be obtained. For example, in one case only one behaviour was recorded, that is, killing using firearms, therefore 100% behaviour is the case can be assigned to the conservative theme. Whereas, in another, five behaviours were identified, three classified as conservative and one behaviour to each adaptive and integrative. Therefore, 60% of the identified behaviour in this case is classed as conservative, and only 20% attributed to integrative and adaptive respectively. This allows every killing event to be assigned to a theme based on what the majority of the behaviours occurring. To be considered as the majority or dominate theme of behaviour in every case more than 60% of actions must be assigned to the theme. The benchmark of ≥60% was used to ensure that the cases are most likely representative of that theme, higher cut off points were ruled out because of the sample validity issues raised in CA and SSA. A higher cut off would result in fewer cases being classified for analysis and the exploratory nature of this study justifies less stringent methodological rules.

7.2.3 Situational factors (IV)

The key reason for selecting MANOVA as the method of analysis for this study is that it can be used to examine the variance of two or more groups when the study has multiple independent variables (Tabachnick and Fidell 1996). In this study three IV's were used to see if there is an effect on the dependent behavioural groups. Table 7.1 and 7.2 shows the three variables, Perpetrator, Time and Location (between-factors) and their associated components (within-factor) identified through empirical analysis of killing events in Cambodia (152) and Rwanda (127). For MANOVA to be carried out the between-factors of the independent variables must be mutually exclusive, because of the need to be specific in what factor within the variable effects the behaviour. Time and location are mutually exclusive, but this is not the case for the perpetrator type, because more than one type of offender can be present during a killing event. In order to accommodate the mutually exclusive condition the manner in which perpetrator information was recorded was transformed and expanded to accommodate this (See Table 7.2 and 7.3). Each perpetrator combination was not recorded as a factor because it would result in a high number of low frequency factors and limit the ability to draw meaningful inferences. Instead the number of perpetrators present during an event was recorded because behaviour may change as a consequence of more people and not necessarily the type of offender. Details of all variables, they collection, formation, definition and limitations are discussed in detail in Chapter 3.

Perpetrator	Frequency	**Time**	Frequency	**Location**	Frequency
Khmer Rouge	37	Instigation	18	North West	37
Soldier	18	Peak	41	North	10
Chief	9	Conclusion	30	South Central	37
				South West	30
				West	20
Total	64		89		125

Table 7.1 Cambodian independent variables from 152 cases

Perpetrator	Frequency	**Time**	Frequency	**Location**	Frequency
Interahamwe	109	Instigation	44	Kigali Central	41
Soldier	55	Peak	37	South	34
Policeman	24	Conclusion	11	East	27
Civilian	16			West	33
Total	204		92		135

Table 7.2 Rwandan independent variables from 127 cases

Perpetrator	**Frequency**	**Time**	**Frequency**	**Location**	**Frequency**
Interahamwe	58	Instigation	44	Kigali Central	41
Soldier	11	Peak	37	South	34
Policeman	2	Conclusion	11	East	27
Civilian	3			West	33
2 Perp	29				
3 Perp	20				
4 Perp	3				
Total	126		92		135

Table 7.3 Rwanda's mutually exclusive independent variables from 127 cases

7.3 MANOVA

Having transformed the study data into measureable formats its suitability for analysis is determined by a series of statistical assumptions. This is to ensure results are accurate, valid and will be representative of the whole population (Nimon 2012). In some cases data that does not meet the required assumptions can still be reported as data can again be transformed into a format which can produce valid results, but they must be reported with caution (Bartholomew *et. al.* 2002). The following sections outline the MANOVA assumptions and the transformation of variables to best meet the assumptions to produce results with a sufficient level of confidence in both Cambodia and Rwanda.

7.3.1 Assumptions

7.3.1.1 Sample size

Firstly the number of cases in the sample must provide a representative portion of the population being studied so any findings can be said to accurately reflect the whole population. In MANOVA the frequency of cases in each cell must be more than the number of dependent variables

(Pallant 2003). In this study there are four dependent variables (behaviour themes) and three independent variables (situational factor) therefore the sample size must exceed 4x3. The 152 cases in Cambodia and 127 cases in Rwanda exceed the minimum number requirement of 12 cases.

7.3.1.2 Group size

Leech and colleagues (2004) suggest MANOVA is robust to violations of normality and homogeneity if groups sizes are nearly equal (*N* of the largest group is no more than 1.5 time the *N* of the smallest group). In both case studies the group sizes between the IV's are unequal but the different counts do not exceed with 1.5 times limit. For example in Table 7.3 Time is the smallest IV with n=92 and the largest is Location with n=135, it is not more than 1.5 bigger and does not exceed the suggested limit. However, at the within-factor level there are larger inequalities in group size. For example, Fig. 7.1 Khmer Rouge n=38 is more than 1.5 time larger than Chief n=9, the within group inequality can also be seen within the Perpetrator variable of Rwanda (Fig. 7.3) where 3 variables fall under the desired difference limit. This within-factor inequality can be reduced by transforming the variable through merging factors, but the factors must remain mutually exclusive, which is why MANOVA in this study will use figures from Table 7.2 rather than 7.3 even though it has better equality of groups. Unbalanced groups are not uncommon in research and can occur because of bias during data collection or variable validity (Chapter 2) analysis of the data can continue as long as care is taken when interpreting and reporting results (Shaw and Mitchell-Olds 1993).

7.3.1.3 Normal distribution

The multivariate nature of this study means that the normality of the sample is assessed by the distribution of the DV's amongst the IV's. It determines if the DV's are normally distributed for each level of the between participant factor, that is each subject within the IV's. Fig. 7.3 shows the between participant factors are themselves unequal, the perpetrator variable has within-factor subjects with less counts (Policeman = 2, Civilian = 3) than the four DV's and this will impact the how the DV's are distributed. However Field (2005) pointed out that if groups are being compared then overall distribution is not as paramount as distribution in each group. Due to this study comparing behavioural groups against three different IV groups then normal distribution of the DV can be assessed against each of the IV groups individually, rather than full factorial examination of the study. SPSS v.17 was used to assess normal distribution of the behavioural groups through the Shapiro-Wilk statistic with a Significance value of >.200 Shapiro-Wilk was the preferred test statistic because the data sample less than 5000 and is said to have the most power of the other normal distribution tests (Razali and Wah 2011).

	Conservative			Integrative			Adaptive			Expressive		
Dependent	**K-S**	**df**	**Sig.**	**K-S**	**df**	**Sig.**	**K-S**	**Df**	**Sig.**	**K-S**	**df**	**Sig.**
Perpetrator												
Khmer Rouge	.233	19	.008	.414	19	.000	.521	19	.000	.474	19	.000
Chief	.385	3	-	.385	3	-	.385	3	-	-	-	-
Soldier	.356	11	.000	.263	11	.032	.263	11	.000	.428	11	.000
Location												
North West	.235	8	.200	.359	8	.003	.513	8	.000	.443	8	.000
North	.394	4	-	.293	4	-	.441	4	-	.441	4	-
South Central	.168	7	.200	.330	7	.020	.337	7	.016	.504	7	.000
South West	.302	8	.031	.370	8	.002	-	-	-	.513	8	.000
West	.167	6	.200	.492	6	.000	.407	6	.002	.401	6	.003
Time												
Instigation	.158	6	.200	.398	6	.003	.492	6	.000	.187	6	.200
Peak	.216	16	.045	.363	16	.000	.515	16	.000	-	-	-
Conclusion	.242	11	.071	.330	11	.071	.384	11	.000	.468	16	.000

Table 7.4 Cambodian multivariate test of normality

	Conservative			Integrative			Adaptive			Expressive		
Independent	K-S	df	Sig.	K-S	df	Sig.	K-S	Df	Sig.	K-S	df	Sig.
Perpetrator												
Interahamwe	.222	58	.000	.389	58	.000	.458	58	.000	.496	58	.000
Soldier	.391	11	.000	.528	11	-	.528	11	.000	-	-	-
Policeman	-	-	-	-	-	-	-	-	-	-	-	-
Civilian	.385	3	.000	-	-	-	.385	3	.000	.385	3	.000
2 perp.	.323	29	.000	.440	29	.000	.517	29	.000	.524	29	.000
3 perp.	.335	20	.000	.502	20	.000	.427	20	.000	.490	20	.000
4 perp.	.385	3	.000	-		-	.385	3	.000	-	3	-
Location												
East	.425	27	.000	.492	27	.000	.520	27	.000	.522	27	.000
West	.193	33	.003	.387	33	.000	.393	33	.000	.488	33	.000
South Location	.224	34	.000	.412	34	.000	.432	34	.000	.490	34	.000
Kigali Central	.334	41	.000	.480	41	.000	.505	41	.000	.526	41	.000
Time												
Instigation	.325	44	.000	.485	44	.000	.495	44	.000	.515	44	.000
Peak	.277	37	.000	.474	37	.000	.453	37	.000	.493	37	.000
Conclusion	.317	11	.003	.392	11	.000	.272	11	.022	.528	11	.000

Table 7.5 Rwanda multivariate test of normality

7.3.1.4 Results

Results in Table 7.4 and 7.5 show that the assumption of normal distribution has not been achieved across the whole samples in Cambodia or Rwanda. In Fig 7.4 it can be said that the conservative theme of behaviour is the most normally distributed DV because it has $p \geq .2$ values in four of the between participant factors. The expressive theme has one Sig. 200 value but no others and therefore it cannot be said to be normally distributed amongst the IV's. No other DV is normally distributed in either case study location which can be attributed to unequal independent variables as previously discussed (See Section 7.3.1.2). Other attempts were made to condense variables into a

smaller number of categorical factors to achieve a greater balance of frequencies across the levels, for example, reducing the timeframe from weeks and years to stages, but this did not improve distribution sufficiently as variables need to remain mutually exclusive.

MANOVA can be sensitive to outliers, if there are frequent or extreme values when the sample is small (Field 2005). Mahalanobis Distance measure can be carried out to identify extreme values and cases that can affect the normality distribution (Coakes 2005). Cases with extreme values can be removed from the study and MANOVA to be run with a more balanced sample. Linear Regression Analysis was used to calculate the Mahalanobis Distance and assess which cases contain the more extreme measurements and contribute to the non-normal distribution. Results revealed that the maximum value of the Mahalanobis Distance is **17.83** between the behaviour groups in Cambodia and **16.454** in Rwanda. The critical value to which this distance measure is compared is determined from the Chi-square table and because there are four dependent variables the critical value of **18.47** p. <.001 is the benchmark. The maximum values of the Mahalanobis Distance measures do not exceed the critical value indicating that there are no multivariate outliers. Therefore, non-normal distribution can be attributed to the skewness of variable counts within the data, which is less critical when carrying out MANOVA (Field 2005). Also, MANOVA is generally a robust statistical method and can withstand modest violations of normality (except where the violations are due to outliers) (Pallant 2003). Again it is worth noting that having a sample which far exceeds the minimum sample size requirements allows for a more flexible approach to accepting the assumptions set for carrying out MANOVA (Coakes 2005). Consequently, it was deemed appropriate to proceed with MANOVA and report any findings with caution given the exploratory nature of the research.

7.4 One way MANOVA

Having not met the prior assumptions sufficiently and Field (2005) indicating that the importance is not the overall distribution but the distribution in each group One-Way MANOVA was used to explore the data rather than the Full Factorial method. This means that the combinations of groups and their possible effects on behaviour is being omitted, but with the lack of normal distribution across the whole sample Full Factorial examination is unlikely to yield results. Consequently, to maximise the accuracy of results and inferences drawn from the MANOVA the four behavioural groups were explored by running MANOVA for each of the three IV's. The results from running the three One-Way MANOVAs are reported collectively for each case study location to enable effective comparison of findings.

7.4.1 Homogeneity of variance

Similarly to testing the assumption of normal distribution between behaviour groups, MANOVA requires that the differences between the groups are roughly equal for each of the independent variables (Field 2005). The Levene's statistic was used to assess the equality of the

differences between the behaviour themes and the situational variables on a univariate level. In order for the assumption of group homogeneity to be met the output requires that the Levene's measurement be significant, with an alpha value of >0.05. Table 7.6 shows the homogeneity of variance for Cambodia and the assumption has been met on one occasion, between the conservative theme and location, but all other combinations violate the assumption. Consequently, a more conservative alpha level must to set for determining significance for that variable in the univariate F-test (Tabachnick and Fidell 1996, p. 80). Table 7.7 shows that the homogeneity of variance for Rwanda has been met between the four modes of offending and the Time IV, however the not all combination of behaviour and IV's have been met, and again the test has been violated.

	Perpetrator				**Location**				**Time Period**			
	Levene	**df1**	**df2**	**Sig.**	**Levene**	**df1**	**df2**	**Sig.**	**Levene**	**df1**	**df2**	**Sig.**
Conservative	3.178	2	61	.049	1.516	4	129	.201	3.522	2	80	.034
Integrative	4.520	2	61	.015	4.479	4	129	.002	6.263	2	80	.003
Adaptive	1.575	2	61	.0215	6.934	4	129	.000	5.840	2	80	.004
Expressive	6.706	2	61	.002	16.905	4	129	.000	5.823	2	80	.004

Table 7.6 Cambodian Levene's test of equality of variances

	Perpetrator				**Location**				**Time Period**			
	Levene	**df1**	**df2**	**Sig.**	**Levene**	**df1**	**df2**	**Sig.**	**Levene**	**df1**	**df2**	**Sig.**
Conservative	6.540	6	119	.000	6.951	3	131	.000	1.587	2	89	.210
Integrative	4.168	6	119	.001	2.468	3	131	.065	3.052	2	89	.052
Adaptive	1.442	6	119	.204	1.550	3	131	.205	2.444	2	89	.093
Expressive	2.411	6	119	.031	1.610	3	131	.190	.095	2	89	.910

Table 7.7 Rwanda Levene's test of equality of variances

As Levene's deals with the data on a univariate level, MANOVA uses a further test of analysis for the multivariate analysis, that is, between the four DV's and the three IV's. Box's M Test assumes that both the variance of each IV is the same (Field 2005). Although this test can be omitted from analysis it is required here because the between groups cell counts are not equal (Field 2005) and the Levene's tests have been violated in part. It is recommended that an alpha value of <.001 is used to assign significance for this test because of its sensitivity. Table 7.8 shows that in the Cambodian sample, "perpetrator" is equal across the four behaviour groups, but "location" and "time" are not. This means that Location and Time both violate the assumption and findings relating to these variables must be reported with caution. Table 7.9 shows that in Rwanda both Location and Time are equal across the four behaviour groups but not perpetrator which supports the Levene's test in Table 7.5. Therefore MANOVA results for these two variables can be reported with a confidence.

Box's M	F	df1	df2	Sig.
Perpetrator				
10.509	.947	10	5449	.488
Location				
364.093	17.148	20	33692	.000
Time				
377.738	17.116	20	6427	.000

Table 7.8 Cambodian Boxes test of equality of covariance

Box's M	F	df1	df2	Sig.
Perpetrator				
207.807	9.658	20	13489	.000
Location				
23.298	1.100	20	36901	.341
Time				
33.153	1.481	20	3263	.077

Table 7.9 Rwanda Boxes test of equality of covariance

7.4.2 Linearity assumption

MANOVA works best when the dependent variables are not highly correlated (Coakes 2005) therefore problems with normal distribution and equality of variance may be as a consequence of the dependent behaviour variables being related to each other. Test of Linearity was carried out to see if a relationship exists between each pair of the dependent variables. Scatterplots of each combination of the four dependent variables were used to establish if any visual linear association between any two variables existed. Linearity was present between all combinations of the dependent variables within the test sample, but the correlations are weak. Therefore, the assumption of linearity is satisfied and any differences identified by MANOVA will be meaningful, rather than as a consequence of changes in the other dependent variables.

7.4.3 Multicollinearity and singularity

There is some linear relationship between the dependent variables, which was expected because of the conceptual reason for analyzing and determining if groups can be differentiated, but a strong correlation is not ideal. Tables 7.10 and 7.11 shows that there is no multicollinearity amongst the DV's in the Cambodian, or Rwandan samples because none of the r values are greater >.8/.9. High correlations are said to be multicollinearity and can be caused by variables being formed through the combinations of other variables. This is not the case in this study as each dependent variable is made up of clusters of distinct behaviours and suitable for exploration as to why they differ.

Behaviour Groups		Conservative	Integrative	Adaptive	Expressive
Conservative	Pearson Correlation	1	-.449	-.363	-.495
	Sig. (1-Tailed)		.000	.000	.000
Integrative	Pearson Correlation	-.449	1	-.156	-.283
	Sig. (1-Tailed)	.000		.027	.000
Adaptive	Pearson Correlation	-.363	-.156	1	.182
	Sig. (1-Tailed)	.000	.027		.012
Expressive	Pearson Correlation	-.495	-.283	-.182	1
	Sig. (1-Tailed)	.000	.000	.012	

Table 7.10 Cambodian absence of multicollinearity

Behaviour Groups		Conservative	Integrative	Adaptive	Expressive
Conservative	Pearson Correlation	1	-.471	-.547	-.501
	Sig. (1-Tailed)		.000	.000	.000
Integrative	Pearson Correlation	-.471	1	-.166	-.056
	Sig. (1-Tailed)	.000		.032	.269
Adaptive	Pearson Correlation	-.547	-.166	1	-.117
	Sig. (1-Tailed)	.000	.032		.096
Expressive	Pearson Correlation	-.501	-.056	-.117	1
	Sig. (1-Tailed)	.000	.269	.096	

Table 7.11 Rwandan absence of multicollinearity

Having established that there are some concerns with the data sample, specifically an inability to achieve normal distribution, the concerns have been addressed and it has been deemed appropriate to proceed. The groups of behaviour which have been classified during SSA (See Chapter 5 and 6) are distinct from each other, and therefore MANOVA will be carried out to establish if modes of behaviour are affected by time, location and perpetrator type.

7.5 Multivariate tests

To test if there is an effect from the situational variables, and whether the effect is significant, the Wilk's Lambda statistic is used. For Wilk's Lambda to suggest that there is a difference among the behaviour groups the significance value must be lower than .05. Table 7.12 shows that the Location IV has a main effect on behaviour and therefore can be used to explain variance in behaviour. There is a statistically significant difference in behaviour based on Location of the killing event, **$F(16, 385) = 1.975$, $p < .001$; Wilk's $\lambda = .742$**. There is no main effect for Perpetrator or Time as the Wilk's statistic has a significance value above the required .05 level. Tabachnick and Fidell (1996) suggest that if the data sample has unequal N numbers and violates assumptions Pillai's trace is a more robust alternative. Results show that there is little difference between Wilk's and Pallai's and Location remains the only IV to have a main effect on behaviour.

Perpetrator				**Location**				**Time**			
Wilk's	**df**		**Sig.**	**Wilk's**	**df**		**Sig.**	**Wilk's**	**df**		**Sig.**
1.301	8	8	.250	2.470	16	385	.001	1.975	8	154	.053
Pillai's F				**Pillai's F**				**Pillai's F**			
1.323	8	8	.239	2.350	16	516	.002	1.935	8	156	.058

Table 7.12 Cambodian multivariate tests

Table 7.13 shows that no IV's have a main effect on behaviour because all statistics have a significance value above the required .05 level.

Perpetrator				**Location**				**Time**			
Wilk's	**df**		**Sig.**	**Wilk's**	**df**		**Sig.**	**Wilk's**	**df**		**Sig.**
.910	24	405	.589	1.338	12	.338	.195	1.251	8	172	.272
Pillai's F				**Pillai's F**				**Pillai's F**			
.908	24	476	.592	1.316	12	.390	.207	1.251	8	174	.284

Table 7.13 Rwandan multivariate tests

7.5.1 Between-Subject effects

Subsequent to establishing that Location has a main effect on behaviour in the Cambodian sample, the next stage of analysis determines if the IV's have an effect between all behaviour themes. This test has a Type 1 error risk, in that there is an increased chance of finding a significant relationship where there is none. Therefore MANOVA offers an adjustment in the form of Bonferroni Correction to reduce the risk when running a number of tests. In this case three tests were run between each of the three IV's and the dependent behaviour groups. Consequently, the level of significance from which the test value can be accepted is reduced from .05 to .017 (.05/3) according to the Bonferroni adjustment. Table 7.14 shows that in Cambodia Location and the Conservative and Expressive modes of offending have univariate F-test values which are significant to the desired level of <.017. Results show that **Location, Conservative = F (4, 129) = 3.857, <.005** and **Location, Expressive= F (6, 129) = 4.528, <.002** as both F-test values are significant below the .017 adjustment.

	Perpetrator				Location				Time Period			
	F	Df	Df2	Sig.	F	Df	Df2	Sig.	F	Df	Df2	Sig.
Conservative	2.530	2	61	.088	3.857	4	129	.005		.280	80	.756
Integrative	2.441	2	61	.096	.828	4	129	.510		1.345	80	.266
Adaptive	.549	2	61	.580	2.916	4	129	.024		1.692	80	.191
Expressive	1.799	2	61	.174	4.528	4	129	.002		3.139	80	.049

Table 7.14 Cambodian between-subject effects

Table 7.15 shows that in Rwanda Location and the Conservative mode of offending has a univariate F-test value which are significant to the desired level of <.017, **Location, Conservative = F (3,131) = 4.924, <.001**.

	Perpetrator				Location				Time Period			
	F	Df	Df2	Sig.	F	Df	Df2	Sig.	F	Df2	Df2	Sig.
Conservative	2.279	6	119	.041	4.924	3	131	.003	2.464	2	89	.091
Integrative	1.082	6	119	.377	.900	3	131	.443	1.019	2	89	.365
Adaptive	.602	6	119	.728	.693	3	131	.558	2.862	2	89	.062
Expressive	.541	6	119	.776	.408	3	131	.748	.032	2	89	.969

Table 7.15 Rwandan between-subject effects

7.5.2 Cambodian post-hoc test

Having determined that Location does have an effect of behaviour Post Hoc tests reveal which of the between participant factors produce this effect. Table 7.16 shows that Conservative behaviour occurred significantly less in the North West region of Cambodia and Table 7.17 reveals that Expressive behaviour occurs significantly less in the South Central region.

Location	N	Subset	
		1	2
North West	37	37.59	
West	20	49.20	49.20
South Central	37	57.35	57.35
North	10	60.70	60.70
South West	30		70.10

Table 7.16 Cambodian Post-hoc test of conservative behaviour and location

Location	N	Subset	
		1	2
South Central	37	4.73	
North	10	7.00	7.00
South West	30	7.20	7.20
West	20	10.85	10.85
North West	37		29.51

Table 7.17 Cambodian Post-hoc test of expressive behaviour and location

Having run the MANOVA a Post Hoc test suggests that Time can also have an effect on behaviour in Cambodia. Time was ruled out through the multivariate tests because the significance value was above the .05 threshold, however it was only slightly above. Furthermore if the stringent Bonferroni adjustment was not applied to the between-subject effects test then it could have been ruled that Time did have an effect on behaviour. It was decided that this study would include the Post-hoc output for Time. This is because the Bonferroni adjustment was applied to be conscientious but given the exploratory nature of this study more flexibility is being applied here to reveal potential

relationships in the data to be pursued in future works with improved data samples. Table 7.18 suggests that expressive behaviour occurs significantly less during the conclusion phase of international crimes in Cambodia.

Time	N	Subset	
		1	2
Conclusion	28	5.36	
Peak	41	14.02	14.02
Instigation	14		29.43

Table 7.18 Cambodian Post-hoc test of expressive behaviour and time

7.5.3 Rwandan post-hoc tests

Table 7.19 shows that the Conservative mode of offending occurs significantly less in the South and West zones of Rwanda. Again Post-Hoc tests suggest that there is a univariate relationship between time and behaviour, however during the multivariate and between-subject tests the significance values were above the thresholds. The results of the Post-Hoc tests will be reported here because time was the most homogenous variable (See Table 7.7 and 7.9) against behaviour in Rwanda. Furthermore, the novelty of this research would benefit from a less conservative approach, which has been applied at every stage of analysis to reveal any tenable relationship between situational factors and behaviour to be examined later with new data samples. Table 7.20 indicates that Conservative behaviour occurs significantly less during the conclusion period of the killing event, whereas adaptive behaviour occurs significantly more in the same period.

Location	N	Subset	
		1	2
South	34	59.59	
West	33	67.27	
Kigali Central	41	76.85	76.85
East	27		88.74

Table 7.19 Rwandan Post-hoc test of conservative behaviour and location

Time	N	Subset	
		1	2
Conclusion	11	55.55	
Instigation	44		76.66
Peak	37		78.59

Table 7.20 Rwandan Pos-hoc test of conservative behaviour and time

Time	N	Subset	
		1	2
Peak	37	5.11	
Instigation	44	6.91	
Conclusion	11		20.00

Table 7.21 Rwandan Post-hoc test of adaptive behaviour and time

7.6 One-way MANOVA results

Results from the MANOVA suggest that modes of offending during international crimes may not be independent of location, or time, in both Cambodia and Rwanda. Perpetrator type does not have an effect on behaviour in either location.

7.6.1 Cambodia interpretation

The location of the killing event within Cambodia could impact the mode of offending. Table 7.16 shows that the conservative theme of behaviour occurs less in the North West region of Cambodia in comparison to any other region. This region was the most rural zone of Cambodia and in 1975 the Khmer Rouge forcibly deported urban populations to the area, doubling its population. It was here that tens of thousands died of starvation in 1976 and widespread purging and killing was reported between 1976 and 1977 (Kiernan 2008). The delay in the onset of the killing could be a contributory factor to the mode of offending in this instance as the subordinate offenders developed their skills over time. When examining serial offences such as murder it is said that offenders can mature, learn and refine their activity from previous offences (Canter and Youngs 2003, Salfati 2008). Harbort and Mokros (2004) said that new behaviour strategies can be employed to reduce risk of being caught but during war crimes some offenders can legitimize their actions through duty, conformity (McDoom 2005) and this could lead to offenders pushing the boundaries of what is required to achieve the government objective. Hence the lack of conservative forms of behaviour in this region as ordinary offenders may have already altered their methods of killing and disposal before systematic killing ensued. This is of course assuming subordinate offenders were killing from the start of the overall crime in 1974. This argument is continued by looking at Table 7.17 which shows that expressive behaviour occurs more in the North West region in comparison to South Central region. It is suggested that the expressive mode of offending in Cambodia is representative of offenders who perform extreme physical attack and sadistic behaviours. This supports the notion that subordinate offenders may push the boundaries of their behaviour as killing progresses if their actions go unchecked. Additionally as time passes the subordinate offender's motivations may change from the sense of duty and conformity to individual objectives as they tried to survive the endemic starvation that affected the North West region as the population doubled. Consequently, behaviour would progress from conservative to expressive and perhaps adaptive modes of offending as offenders become self-seeking and exploitative of the ongoing violence for personal survival. What these

findings suggest is that the demographic development of a region can contribute to the violent behaviours expressed. It could be argued that regions within Cambodia that suffered less in terms of starvation and population stress would probably be associated with conservative forms of behaviour.

Table 7.17 also shows that the expressive mode of offending occurs less in the South Central region over the rest of Cambodia. This region encompasses Phnom Penh, the administrative hub of the Khmer Rouge and the lack of expressive modes of offending supports the assumption that subordinate offenders within this region would enforce the regimes ideology stringently. Indeed the Khmer Rouge praised this region for its outstanding agricultural output and "revolutionary fervour" (Meng-Try Ea 2005). This suggests that subordinate offenders are unlikely to exhibit expressive or deviant forms of behaviour in this region because of the administrative stronghold. Physical and psychological distance from the administrative centre may also account for the lack of conservative behaviour in the North West region. Superior offenders providing instructions for a region detached from the central region may wish to stamp they own authority on proceedings such as being enthusiastic in killing activities to hold favour with their superiors. Furthermore, the North West region borders with Thailand and this proximity to a nation viewed as an enemy of the Khmer Rouge (Meng-Try Ea 2005) could have impacted the mode of offending. The widespread and systematic killing associated with the conservative theme would have drawn attention from Thai authorities who the Khmer Rouge mounted cross-border attacks against in 1977 (Kiernan 2008). There is also the consideration of the availability of resources, the South Central region had the best agricultural output therefore less pressure, were as the North West may have suffered more from starvation, more pressure and more expressive forms of behaviour from those fighting to survive. Again, that variation of killing methods can be attributed to region and it is perhaps the demographic make-up of that region that dictates the mode of offending used by subordinates.

The timing of the killing event may also have an effect on behaviour in Cambodia, as Table 7.18 shows expressive behaviour is less likely to occur in concluding stages of the crime. This was expected as it was reported that subsequent to cross border attacks on Thailand, Laos and Vietnam the Vietnamese launched an assault on the Khmer Rouge, forcing them to retreat and concluding events (Kiernan 2008). The border attacks on the neighbouring countries could account for the lack of expressive behaviours in the final stages because the Khmer Rouge was on the defensive, and violence became focused on reacting and countering attacks. To defend Vietnamese actions would have required organisation, and less opportunity for subordinates to exploit the Khmer Rouge regime for personal gain. According to Ciorciari and Chhang (2005) a report sent to the Khmer Rouge central office in 1977 detailed clashes between border troops and Vietnamese forces, the report noted that soldiers on both sides opened fire using shells, bombs and machine guns. It went on to say that the Vietnamese provoked turmoil, open fire and invade every day. In 1978 domestic Cambodian "insurgents took up arms and clashed with the Khmer Rouge forces" (Ciorciari and Chhang 2005, p. 281). This external and internal aggression could have been the catalyst for the Khmer Rouge to

eliminate party enemies as the regimes power was becoming increasingly under threat. The extermination of the 'enemies' would have required widespread and systematic actions to prevent other internal agents from obstructing the party. The widespread and systematic actions that form the conservative mode of offending, or perhaps adaptive behaviour would have to be employed as subordinate offenders had to counter the daily and unpredictable attacks, however post-hoc tests did not determine if these behaviours varied because of time.

7.6.2 Rwanda interpretation

In Rwanda location and time could affect the conservative mode of offending. Table 7.18 shows that conservative forms of behaviour occur significantly less in the South and West regions of Rwanda. This too can be linked to the delayed onset of killing. During the first two weeks of war crimes the southern prefectures of Gitarama and Butare resisted violence, but eventually conceded to pressure from the government, and powerful members of the interahamwe (Fletcher 2007). According to McDoom (2005) prior to killing in April 1994 the southern region had no earlier state-sanctioned anti-Tutsi activity and no automatic move to eliminate Tutsi's until a state-representative signalled a pro-genocide move. However, it was determined that the South had a more complex interaction because the Hutu and Tutsi in the area had similar historical conditioning (Verwimp 2006, Mc Doom 2005), hence the delay in killing. Together Hutu and Tutsi set up roadblocks subsequent to seeing houses burned in the surrounding hills, but once it became clear Tutsi's were the target defection to targeting Tutsi's in that area began and resulted in the looting and destruction of Tutsi property (Mc Doom 2005 p. 10). Although it was inferred in the Cambodian case that the passing of time would enable offenders to learn and refine their offence behaviour, much of the killing was performed by Khmer Rouge Cadre and the change would have been borne out of pushing boundaries. Here perpetrators are mostly civilians with different objectives from offenders duty bound to participate. Taking into account Mc Doom's (2005) reference of society development in the Southern regions it is argued that the lack of conservative behaviour is because of the personal motivations of the subordinate offender. It appears that the prospect of monetary gain drove people in the region to offend in this manner, which actually corresponds with the findings in Cambodia where it was suggested that the prospect of starvation also contributed to the manner of offending, the fewer resources the more expressive the behaviour. According to Rwanda's empirical model set out in Chapter 6 (Fig. 6.3) loot was classified as conservative, but it was argued that the behaviour would be better suited to the adaptive mode of offending because of opportunistic qualities attached to the action in other criminal offence studies (Section 6.6.1). Furthermore, loot was positioned away from the core behaviours within the theme, suggesting a weaker relationship with the other actions in the conservative region. Looting may co-occur with the more expressive behaviours but three expressive behaviours were removed in SSA because of the occurring in <5% cases exclusion threshold. If they were included in the analysis then the position of the loot variable may have shifted closer to the

expressive theme but this can only be inferred. Nonetheless the lack of conservative behaviour indicates less implementation of superior offender instructions and subordinate offenders are performing a wider array of killing and disposal methods in those regions. Making these inferences highlights the qualitative advantages of SSA as it helps draw out considered rationales for behaviour and enables the researcher to use the knowledge gained from data collection to inform theories. In turn this maintains the argument for the employment of empirical models to explain war crime offence behaviour.

When examining behaviour over time Table 7. 19 showed that conservative behaviour occurs less in the concluding phase of offence activity. This counters the phenomenon identified in Cambodia whereby attacks by Vietnam troops and internal insurgents were used to explain that expressive behaviour occurred less. In Rwanda French peace keepers were sent in on 23rd June 1994 (Stanton 2012), not to attack but to prevent further killing, in which case offenders would have ceased the organised violence because offenders were mostly civilian with primitive weaponry that would not withstand military forces. Also, the United Nations were at this point observing the violence from the perspective that war crimes were being committed, rather than civil conflict as the offence was being portrayed (Thompson 2007). Consequently, offenders would have become increasingly reluctant to kill. Finally conservative behaviour may have been exhibited less in concluding stages simply because much of the killing had already taken place with 800,000 Tutsi and moderate Hutu being killed in just 100 days (Verwimp 2006). The rate of killing inevitably reduced the target population when combined those leaving Rwanda as refugees would have meant that the widespread systematic nature of the activity would have become harder to achieve. Table 7.20 indicates the adaptive mode of offending occurs more during the conclusion, and is consistent with the belief that subordinate offenders would have needed to adapt during the final stages of the offence if they were to continue to kill and dispose of a dwindling target group with the international community beginning to take notice of events, and therefore offenders would have more opportunistic. Also, adaptive behaviour is linked to the personal gain of the offender (Hollows and Canter 2001) and conforms to the notion that offenders would have been seizing the opportunity to benefit from their neighbours extermination as indicated by events in the Southern region of Rwanda.

7.7 Probative inferences

The results of MANOVA show that location and time could affect the occurrence of conservative and expressive modes of offending. This is significant because this study claims that these modes of offending are performed by two types of offenders, subordinates performing the actions sanctioned by superior offenders and offenders whose ground actions represent alternative objectives such as personal gratification or gain. So, factors influencing modes of offending are affecting the two types of offender. This means that using the empirical models developed in this study has the potential to be used by the ICC to support evidence gathering, build cases against

individual offenders by inferring intent and knowledge of actions which will ultimately contribute to prosecutions. The findings could contribute to ICC proceedings by providing the baseline knowledge of the most responsible offenders from which perpetrator and witness questioning strategies can be revised to extract information that connects individuals to offence activity. The models can also assist in forensic investigations as they set out to recover the physical evidence of behaviour that will either corroborate or dismiss witness accounts of events. Prior information about the type of behaviour to expect in a specific region, or, at a particular time can assist forensic teams in their logistical and resource planning prior to mass grave exhumation. Knowledge of what to expect during an excavation is beneficial because in the case of mass graves evidence can only be recovered once (Klinkner 2008), it cannot be re-examined in its original form, and why more efficient strategies are needed.

As previously highlighted historical accounts of war crime activity and the actual patterns of ground actions identified in this study do not always correspond. Ground actions which are not popularized by historical and narrative accounts may be overlooked but can be important to an investigation. For example, the stabbing behaviour classified as a conservative action in Rwanda. Acknowledging the importance of this action can make investigators aware of what evidence to look for at a crime scene, especially if located in an area associated with conservative forms of behaviour and lead to better crime scene examinations. Subsequently, this data can be used to link a crime scene to a mode of offending, then to time period and finally the probable offender. Also, determining that some actions are more likely to occur in one region or time period over another can be used to link offences. For example in Cambodia firearms and surface disposal are classified as expressive behaviours, which occur less in the South Central region of the country. If forensic teams discover a large proportion of victims with firearms injuries in that area then it could be argued that the bodies were moved to that location as perpetrators can take measures to hide and destroy evidence. Making this connection was hugely significant to ICTY because forensic examiners were able to demonstrate that graves were dug up and moved to other locations based on trauma patterns and grave objects such as masonry and paint (Manning 2000, Wright 2010). From this alternative theories surrounding events in the Balkans were dismissed. It was proposed that deaths in the region were attributed to conflict and that graves contained combatants, but without bodies it was difficult for the Court to establish what happened (Skinner *et al.* 2002.) Consequently, location of victims for exhumation became paramount. The relationship between situational factors and the conservative and expressive mode of offending can also contribute to the search for bodies. For example, disposal methods classified within either of the two themes can be linked to some locations. In Cambodia conservative actions such as grave burial are less likely to occur in North West region and with this in mind investigators could prioritise searches of alternative disposal methods. Although prioritising and focusing searches allows for the most efficient use of ICC resources it is worth noting that identifying victims eliminated through all forms of behaviour would result in a more representative sample of the victim population, and enable more informed inferences. This study was undertaken because without

examining all material elements of war crimes an inference about perpetrator behaviour is flawed. The most frequent actions of war crimes do not fully illustrate the actual events nor can they be used in isolation to infer the intent of the superior offender, or the knowledge of the subordinate. Being able to apply a timeframe to offence behaviour is also important to forensic examinations because it provides the ICC with a benchmark to compare actions. For example, when a forensic team examines a crime scene and all behaviours are associated with the conservative mode of offending in Rwanda it can be suggested that the scene relates to earlier stages of the crime, given the MANOVA findings. This information in conjunction with location could be used to narrow the perpetrator overseeing the killing and triangulating evidence.

The fact that the same situational factors (time and location) could have an effect in both Cambodia and Rwanda suggests that findings may apply to war crimes in general because variances in behaviour occur in the concluding stage of the war crime regardless of country of conflict. However, the theme of behaviour most likely to occur during that stage is different in each location. As already discussed during CA and SSA, war crime behaviour models need to be tailored to account for the historical, social, economies and demographic difference between each case study location. Nonetheless establishing that time and location may effect behaviour expression could assist investigating teams when prioritizing crime scenes and offender examination. This could optimize the search for specific ground actions that connect the material element of the war crime to the superior offender, infer their intent, as well as inferring the knowledge of the subordinate and their individual culpability. A subordinate offender's knowledge can be tested by the manner in which they offend during the most conservative or expressive time period. For example, performing expressive behaviours in a period when conservative behaviour is performed more, such as the concluding stage Cambodia's offences brings into question the subordinates co-operation with superior offender orders. Offenders deemed to be using expressive forms of behaviour during that time period may be operating outside superior instructions, and so they may not then use duress to mitigate against charges of war crime offences. This prioritization of perpetrators may help differentiate between most responsible offenders and others whose justice is better served through domestic and national court systems (UNSC. (2002). Resolutions Document: S/PRST/2002/21) thus allowing ICC resources to be used more effectively, and why the empirical models developed throughout this research may supplement other evidence used during ICC proceedings.

Chapter Eight
Discussion

8.1 Summary of findings

This thesis examined the material elements of war crimes likely to be left at crime scenes by subordinate offenders. It explored tangible ground actions to establish the nature of war crime behaviour and ascertain if patterns emerge during multivariate analysis that assist in conceptualizing the complex offence. The study also examined how the baseline knowledge of the material elements of the crime can be utilized by the ICC to broaden their evidence repertoire, and contribute to the investigation of perpetrators. Descriptive analysis of witness testimonies from Cambodia and Rwanda revealed that rather than one or two core behaviours overbearing the whole sample as assumed from historical and legal reports, war crime behaviour consists of a wider range of medium frequency actions. Some actions are generic and can be found in most instances of war crime activity, for example, use of firearms and disposal of victims in graves. However, actions such as stabbing and liver removal occur more frequently than expected. These actions could have bearing on prosecutions but have been overlooked as components of war crime activity in most literature. The empirical model in this study suggests that the ICC does not use a representative sample of the material elements of war crime, and therefore, cannot contextualize all evidence of offender behaviour to build cases and make judgements of culpability. This shows that more empirical models need to be developed for war crime offences in order for the ICC to make more accurate assumptions on how an offender contributes to war crimes.

Cluster Analysis and Smallest Space Analysis of all identified ground actions showed that non-verbal behaviours exhibited by subordinate offenders may be differentiated into four distinct groups of offending. The analyses revealed that both methods classified actions into the same conservative, adaptive, integrative and expressive themes previously identified by Hollows and Fritzon (2012). However the actions attributed to each theme differed between Cambodia and Rwanda, and shows that the manner of war crime offending is country specific. Differences may occur because historical, economic and demographic factors can influence the theoretical significance of each action. Regardless of which actions are classified to each theme, the conservative mode of offending can be indicative of subordinate offenders who conform to superior offender instruction most rigidly and probably performing the actions with the knowledge that their actions contribute to a much larger international crime. Whereas the actions in integrative and adaptive themes are suggestive of offenders with more freewill, who perhaps interpret commands to eliminate a population group in a manner that suits their personal agenda. Finally the expressive theme can relate to subordinate offenders most likely using the cover of war crime violence for personal objectives. It can be argued that offenders subscribing to this theme may not be aware that their actions are

contributing to a war crime, which may mitigate culpability, but can still be relevant to national tribunal investigations.

Multivariate Analysis of Variance revealed that the occurrence of conservative and expressive modes of offending could vary depending on the geographical location and timing of an event in both case studies, and adaptive behaviour was also affected by time in Rwanda. These variances suggest that the ICC could use this contextual information to support and develop investigation strategies in relation to specific locations and time periods most likely to exhibit conservative and expressive modes of behaviour. The investigative emphasis on conservative and expressive modes of offending can advance knowledge of the material elements most relevant to the Court when building cases against the most responsible offenders and at the same time potentially rule out offenders more suited for the national judicial systems. Overall, the empirical models developed in this study have demonstrated that multivariate analysis of ground actions exhibited during war crimes could make a practical contribution to war crime investigations and assist the ICC in prosecuting individual offenders based on their individual mode of behaviour.

8.2 Thesis summary

The opening overview of international criminal law and the evidential burdens attached to prosecuting superior offenders confronts the issue of isolating the individual from a collective crime. That is, the need to demonstrate the knowledge and intent from the material elements of the offence in order to charge perpetrators with the most appropriate crime, which can be inferred through crime scene actions and forensic evidence. This set the framework for this study as it aimed to determine if ground actions can be differentiated into themes of behaviour that can infer the intent and knowledge of offenders. The ground actions were derived from archives relating to war crime violence in Cambodia and Rwanda and subjected to the data summarization methods of Cluster Analysis and Smallest Space Analysis. A total of 44 ground actions were identified from 294 cases of violence across both case studies using content analysis. Establishing the nature of war crime behaviour revealed that the most frequent actions corresponded to the few reported in historical accounts and evidence reports. Actions such as the use of firearms and machetes, beating and grave disposal, common in both case study locations, are also often referred to in previous studies outlining the development of a war crimes in the respective locations (Kiernan 2002, Chandler 1999a, 1999b, Des Forges 1999 Melvern 2004), as well as, in literature that summarizing forensic investigations (Pollanen 2002, Manning 2000 and Wright 2010) but few discuss the full range of actions that occur against this backdrop.

Descriptive analysis revealed that no one action completely dominated either sample in this study, instead a wide variety of medium frequency actions occurred and references to these behaviours are for the most part omitted from literature. There are no prior studies to support this finding, and the few studies covering specific forms of violence exhibited during war crimes are

limited to one or two actions. Verwimp's (2006) study simply compared the use of firearms and machete in one prefecture in Rwanda, Ta'ala and colleagues (2006) examined blunt force trauma patterns from 85 skulls recovered from one location in Cambodia, and Pollanen (2002) examined trauma patterns of victims exhumed from three mass graves. Results from the Ta'ala (2006) study itself did not produce conclusive results of how most individuals were killed in Cambodia, as only 10 skulls from the 85 had evidence of blunt force trauma to the skull even though this form of killing is extensively referenced in literature. The work by Pollanen (2002), although restricted to just three graves revealed that chopping injuries also formed part of the repertoire of violence that can be associated with the material element of the war crime, yet it has been overlooked in studies and historical accounts. Consequently, the few studies that aim to quantify the material elements of war crime are not representative samples of the types of ground actions that can occur during war crime activity, as issue this study aimed to redress. Descriptive analysis also revealed that the frequency of events throughout Cambodia and Rwanda were not distributed across the countries as expected. Although both locations have a higher frequency of killing events in close proximity to their respective capital cities, the frequency of events in the surrounding regions is inconsistent. In Rwanda the northern region is devoid of reported killing activity and in Cambodia it is the east. This too supports the belief that the material elements of war crimes have not been fully examined, or representative of the whole country and this can have legal ramifications when assumptions are made without comprehensive knowledge of the whole sample and contextualize crime behaviour.

Cluster Analysis and Smallest Space Analysis were used simultaneously to provide methodological triangulation and a more robust analysis of this novel research. Both forms of analysis identified four themes of behaviour, Conservative, Expressive, Adaptive and Integrative. This supports Hollows and Fritzon's (2012) findings when they examined the behaviour of perpetrators of the Bosnian genocide but their variables were not comparable because they sampled superior offenders, whereas this study focused on the ground actions of the subordinate offenders. However, Hollows and Fritzon's (2012) modes of offending helped rationalize the theory attributed to the themes in this study. For example, their conservative theme was connected to genocide's objective but members of that group did not appear physically or violently participate but manipulated others to do so (Hollows and Fritzon 2012). In this thesis the conservative theme is attached to the subordinate offenders conforming to superior offender instruction and their ground actions reflects the war crime objective. The variables attributed to the theme support this assumption in that they are the most widespread, frequent and systematic ground actions. The Adaptive and Integrative modes of offending are not as theoretically defined in this study because of the lack of historical references to the behaviours attributed to either theme. Also, weak internal consistency limits the ability to form solid theoretical rationale for behaviours within the themes. Nonetheless, fundamental theoretical justification of the themes has been developed from the knowledge gained through data collection and inferences made by Hollows and Fritzon (2012) whilst taking into account the methodological

differences with their study. Hallow and Fritzon's (2012) adaptive and integrative themes were attached to actions of sub-groups of offenders with differing behaviour backgrounds. From the subordinate offender perspective (this study) it was thought that offending differences may be due to offender type, for example civilians would offend differently from military because of their backgrounds, however this was not confirmed by MANOVA results. Consequently it is proposed that the adaptive and integrative modes of offending are perhaps performed by perpetrators who are confident enough to bypass direct orders, and perhaps challenge authority by using alternative forms of killing and disposal. This gap in theoretical understanding of subordinate actions could be addressed with the inclusion of verbal actions in future studies, as physical actions can be better explained when co-occurring with verbal instructions. Finally, the expressive mode of offending points towards offenders fulfilling personal objectives because there is little strategic gain in the war crime context for these forms of behaviour and therefore are more likely to be performed out of personal satisfaction of the individual. The identification of the same modes of offending in both case studies and comparisons with Hollows and Fritzon's (2012) study supports the idea that ground actions can be classified into meaningful themes of offending.

Although, the internal consistencies of each theme in both studies were weak with no Kuder-Richardson 20 values above .5. Nevertheless, further empirical analysis was undertaken because of the consistencies between Cambodia, Rwanda and Bosnia. Also the novelty of this study and the investigative support the findings could provide with improved samples (subsequent to recommendations throughout this study) it was considered appropriate to proceed with MANOVA. The relationship between the situational factors of time, location and perpetrator type and the Conservative, Adaptive, Integrative and Expressive themes of behaviour in Cambodia and Rwanda were examined using MANOVA. It was determined that time and the geographical location of a killing event could affect the type of behaviour exhibited. These findings are reported with caution because they were achieved subsequent to concessions as the data sample failed to meet some assumptions. The normal distribution of the sample posed the greatest difficulty and all appropriate measures were taken to limit the overstating of findings and findings were subsequently reported because no outliers were detected. Also, it is argued that the findings are an important component in the future development of baseline knowledge of war crime behaviour, especially when considering the novelty of the study as a whole.

8.3 Theoretical considerations

The lack of prior studies on war crime behaviour may be due to the nature of the crime itself, it is complex and dynamic, unlike national crimes such as rape, murder and robbery which are usually performed against one victim by one perpetrator. War crime is an accumulative crime, it can be comprised of all forms of national crimes as well as massacres and these offence activities can be performed by individuals, small groups, whole communities and government parties. All of these

elements can be influenced by environmental, contextual and cognitive factors. This intricacy is reflected in this study through the poor internal consistency of behaviour themes in both case studies, which means that an individual's actions cannot be reliably attributed to the same mode of offending in every case. Also, MANOVA results suggest the factors may influence behaviour in both Cambodia and Rwanda, that is, the time and locale in which the killing activity occurred. These two factors and perpetrator type were the only features measured here because of they can be tangibly linked to ground actions. Offender consistency and homology could not be measured in this study because of the offender framework that exists in execution of war crimes. Without examining each individual offender the underlying theories attached to these principles have to be assumed, and as yet there is no means of predicting offender behaviour. This is perhaps an option for future research as it could enable investigators to narrow field of search for likely offenders, and link killing events to individual's or offender groups which will assist in building cases against prolific perpetrators.

8.4 Translational findings

This thesis has developed an empirical model of killing and disposal methods performed during war crime activity in Cambodia and Rwanda which the ICC could draw upon to contextualize offender behaviour. It outlines all forms of non-verbal offence behaviour and highlights the shortcomings of historical narratives when trying to gain an understanding of the material elements of the offence. This paves the way for future examinations of war crime behaviour, that is, to extend the search for data beyond the general assumptions of the types of violence used in particular locations. This study has shown that common actions may not be as frequent as first thought and a representative sample of behaviour is better to make informed conclusions.

The multivariate analysis of all of these actions suggest that war crime behaviour could be summarized and classified into modes of offending which the ICC can use as a baseline to draw upon and make inferences about offender activity. Identifying the conservative, adaptive, integrative and expressive modes of behaviour in both samples is reassuring especially as the findings reinforce those of Hollows and Fritzon (2012), but still bearing in mind the weak internal consistency of the models. Establishing that the conservative mode of offending contains ground actions characteristic of superior offender's directives suggests that material elements relevant to the judicial proceedings can be isolated from others for detailed examination. The ability to suggest ground actions linked to superior offender and actions that may not can support the ICC investigations when trying to prioritize cases and probable offenders based on the crime scene actions presented as evidence. However, this would not be advised based on single actions given the weak internal consistency of the themes in this study, nevertheless the study adds meaning to co-occurring actions and provides a baseline of ground actions against which information about war crime offences can be compared.

8.5 Practical applications

Determining that an offender conforms to a conservative mode of offending, or otherwise, during war crimes can have multiple practical applications that could support ICC investigators with evidence collection strategies. Firstly, knowledge of the types of violent actions performed across the whole country can be used to guide interviews of offenders and witnesses to extract the most pertinent information. When reflecting on this study the details that proved most important whilst gathering data was having concise details of the manner of killing and disposal, as well as the particular offenders contributing to the acts. That is, rather than providing ambiguous terms such as "smash" and "hack", interviewees could be asked to specify the exact manner of killing because from these vague terms it is not possible to determine if the behaviours are representative of single execution type action or multiple strike overkill. This distinction is important because it can determine if the subordinate is operating within the confines of superior instruction and doing just what is necessary to perform the task, or over-killing because of individual motives. Knowing what information is best to extract would optimise time spent interviewing, court resources and could mean a less traumatic process for the witness having to recall information which inevitably may not have evidential value. Also, offenders could be questioned more directly about their activities and inevitably provide the information that could suggest they culpability in the overall war crime offence.

The second practical application of this study is the support it can give forensic investigations. Being familiar with the types of killing and disposal actions to expect will enable teams to revise evidence recovery strategies. Strategies can be built on the perception that conservative modes of offending would be the most beneficial focus for criminal proceedings. Forensic examiners could concentrate their search for tangible evidence of modes of offending using knowledge of situational factors of time and location. For example, examinations can be centred on the time and the locations conservative behaviour is most likely to occur. Additionally, when drawing on the evidence from crimes scene, the killing and disposal actions identified could add to the dating evidence of the scene, because in Cambodia conservative behaviour is more likely to occur in the concluding stage of Khmer Rouge control. This in turn can be used to connect the crime scene to a specific offender. Knowing what actions co-occur in a particular theme of offending can heighten the teams awareness of what to look for at the crime scene such as a mass grave. This can improve the quantity and perhaps quality of information gathered, not only from the scene, but from subsequent forensic anthropological analysis of the victims for trauma patterns that might support witness accounts of events. Although it is worth noting that being provided with this information could result in expectancy and confirmation bias (Kassin *et al.* 2013) and strategies may need to be put in place to prevent this but still benefit from knowledge. Crime scene examinations in war crimes cases may already be biased in their assumption because media propaganda, political pressure, misrepresentation of violence and the fact that the Office of the Prosecution often dictates what scene need to be examined (Klinkner 2012). It must be noted that whilst it is argued that the MANOVA results are tenable, results were not conclusive given

the assumption violations and therefore this practical application of the empirical model is currently limited. Outside the realm of justice the practical applications could be extended to provide humanitarian assistance, because along with need to recover bodies to demonstrate that war crime has been committed, victims also need to be recovered to provide families with closure. However, searches for the missing can be constrained by cost and time factors, as well as the Courts need to locate victims that provide the best evidence against indicted perpetrators. In which case victims disposed of outside the more frequent methods can be over looked. For example, being able to imply that conservative forms of behaviour are least likely to occur in the North West region of Cambodia (See Table 7.16) means that NGO's who focus on the search for the missing could place more resources in locating disposal locations that are not conducive with the conservative theme, for example search more wells, drains and rivers than grave sites.

8.5.1 Method applications

The use of Cluster Analysis and Smallest Space Analysis to examine war crime behaviour can also have practical implications for the ICC. Both methods, although scientific in the fact that they systematically summarize volumes of information in a transparent manner, they are not so complicated as to require specialist training to perform and understand outcomes. That being said the interpretation of findings does require investigators to be accustomed to the history, development and war crime activity of the country under examination to make informed inferences about the material elements of the crime. Also, the use of analytical methods does allow for findings to be independently tested. This ability to repeat analysis from data is beneficial over the forming of opinions based on the narrative descriptions of events by witnesses who may not be able to recall the exact same information.

Summarizing narrative information into data for multivariate analysis is useful in that large quantities of information can be presented in a format that promotes the most pertinent points. This can remove the burden of witnesses during trial proceedings who may find the providing testimonies traumatic, as well as removing the emotional element of the narrative which can obscure the factual information required for prosecution. This brings about the ethical considerations of the study in that these methods can extract the pertinent information from witness accounts without the trauma of repeated recall by witnesses. The process of can be anonymised which can be safer for the witness given that some witnesses in Rwanda were subjected to intimidation to prevent evidence being given (Trotter 2012). However, there is an argument for including witnesses in the trial process as it can provide a sense of closure and justice, and transparency in the Court system.

Finally, the summarization of data and the evidential inference that can be made from results can provide a cost and time saving benefit for investigating teams and the ICC, less time may be spent on having numerous witness recount events repeatedly to gauge the patterns of the perpetrator behaviour. Instead using the methods in the study patterns could be established pre-trial, shortening

trial times and thus resources. Although there must also be an opportunity for the defence to question such findings, then witnesses can be called to ensure a fair trial is upheld. In which case results from the study can be used to support witness testimonies and help triangulate the narrative and the forensic evidence that are paramount to the judicial process.

8.6 Limitations of the research

8.6.1 Variable type

Outside of the inherent limitations associated with undertaking qualitative analysis and using archival data, which are discussed in Chapter Two a main limitation of this study was that it was restricted to examining ground actions. Although there was a practical rationale for limiting research variables to evidence that can be physically recovered from a crime scene, the inclusion of verbal behaviour could have had a positive impact on the study, as demonstrated by the work of Hagan and Rymond-Richmond (2009) who used verbal racial epithets to infer collective genocide in Darfur. However, verbal actions were omitted on the basis of their subjectivity and inability to recover the information from a crime scene through forensic evidence. Therefore, not all war crime behaviour is recorded here and is reflected in the eccentric radex of the SSA plots shown in Fig 5.3 and Fig 6.3. The omission of this aspect of the crime may also contribute to the lack of internal consistency of the themes of behaviour. The inclusion of more variables with suitable frequencies could have assisted in making inferences from a more balanced sample. Examining verbal actions in conjunction with the physical behaviour could assist in interpretation of the themes because, for example, the giving of orders being associated with the conservative actions could add weight to the definition of the theme.

8.6.2 Data type

The testimonies used in this study are biased towards survivors of the offence because the archives focus on being memorials for the victims, consequently perpetrator narratives have been largely overlooked in this case study. This can result in a lack of a balanced and triangulated perspective of events, but then it is often questioned whether offenders would provide an objective account of their activity. The use of witness accounts of ground action activity was deemed appropriate for this study because of the volume and ease of access to the information, but it would be beneficial to re-run analysis using variables retrieved from offenders to see if material elements of the crime can be classified in the same manner and consolidate findings. Hollows and Fritzon's (2012) study used perpetrators as their source of data and whilst their findings are comparable in part with this study they do not examine the ground actions. This leaves additional opportunity to examine their variables using the ground actions variables developed here and establish if results can be repeated, thus substantiating findings. Finally it would be worth repeating both studies with new samples from differing locations to determine if results are attributable across locations, offender type and data source. This knowledge would enable the ICC and investigation teams to be aware of any variations

in ground action classification that could provide the Defence with opportunities to present alternative explanations for war crime activity.

8.6.3 Methods

8.6.3.1 Cluster analysis

The limitation of the CA is the subjectivity when finalising the cluster solution. Although the use of the method and its results has been justified throughout, the exact solution can still be debated, and could be scrutinised as part of the legal process. However it is argued that as long as each stage of analysis and results are presented then its use in summarizing ground actions is appropriate, especially given its ease of use by non experts. Another limitation of the method is that it does fully account for the qualitative relationships between variables, which is important when developing empirical models of previously unexplored behavioural data, hence the use of SSA to compensate for this limitation.

8.6.3.2 Smallest Space Analysis

Although SSA is widely used to examine the behavioural structure of offences such as murder and rape, it has only been performed once on war crime behaviour prior to this study, and whilst results are comparable to Hollows and Fritzon's (2012) there are notable differences. In the past SSA has been criticised as it often failed to replicate structures when using different samples (Sturidsson *et al.* 2006), which is true for this study. Although the same modes of offending have been identified the manner in which the SSA plot is partitioned and variables classified into each region differs, as they both also differ from Hollows and Fritzon's (2012). Nevertheless it is beneficial in exploring the conceptual processes behind the offence which have not been afforded sufficient research to enable informed inferences about offender behaviour.

8.6.3.3 MANOVA

The principle limitation associated with the MANOVA is that it violates some of the assumptions that safeguard the reporting of findings. Although assumptions such as normal distribution have not been met, they have in part, and all appropriate measures of caution were in place so that findings would not be over stated. The inability to meet some of the assumptions does not detract from the overall study because the research was undertaken to point out patterns of behaviour and the factors that might influence. It is not to predict behaviour or offender type which requires more rigours empirical support. However, future work with a more appropriate sample with adequate distribution may be able to follow this approach when examining war crime behaviour.

8.7 Future recommendations

The future of this research lies in developing improved empirical models of war crime offence behaviour. This study has initiated the process and has demonstrated the evidential potential

in exploring the ground actions of subordinate offenders. Future study could test these results to confirm their underlying theory and with improved sampling and data sources following the limitations of this study. This could be achieved by replicating this study using the ground actions from different countries to determine if the same themes remain and consolidate findings. Other recommendations would be to re-run this study using different sources of information, such as perpetrator accounts of events, actual evidence recovered from crimes scenes such as mass graves and the inclusion of verbal behaviours. This could substantiate the inferences about offender behaviour made throughout this study and perhaps shed light on the offenders who subscribe to the adaptive and integrative modes of behaviour. These forms of offending have not been adequately addressed and it is argued that this is because of methodological problems associated with this study. The examination of integrative and adaptive modes of offending should be pursued further because analyses may result in the identification of sub-groups of offenders, whose culpability is not recognised because their role within war crimes is not conceptualized. A new study with an improved sample may rectify this and go further in assisting the ICC in differentiating offence behaviour and prioritizing most responsible offenders from others best served by national systems.

8.8 Conclusion

Firstly, this study set out to examine if the ground action patterns of subordinate offenders could be used by the ICC to link the material elements of the crime to the superior offenders disengaged with the killing. Secondly it set out to establish if the patterns of behaviour can be used to assist ICC investigators in prosecuting the most responsible offenders. This thesis showed that the ground actions of subordinate offenders could be differentiated into themes of behaviour that are linked to the implementation of superior offender directives. Also, results show that subordinate offender behaviour can be affected by time and location, and this can provide a tangible link to superior offenders operating in a location, or during a particular period, and that the actions are most likely attributable to them. All of this can be used by the ICC to link material elements of the offences to superior offenders and therefore be used to establish their individual culpability in carrying out war crimes.

The main findings encompass the fact that ground actions classified within the conservative theme of offending are mostly likely representative of the sanctioned forms of violence that descend the ranks from the administrative hub. This notion is supported by the fact that conservative forms of offending are more likely to occur in close proximity to where the administrative centre is located. The adaptive and integrative themes of offending are not as diagnostic of superior offender ideology, nonetheless it can be argued that they reflect mid ranking offenders undertaking their tasks using their own authority, initiative and style. The expressive mode of behaviour is most likely to be diagnostic of the subordinate offender using the cover of widespread violence for personal gain, either emotionally, or financially. Finally this study shows that war crime offence behaviour is extremely

complex, more so than most national crimes. This is because of the intricate network of offenders, offender groups with overlapping hierarchies being influenced by factors such as time and location, as well as other environmental and victim resistance factors not covered in this study.

Although the results in this study are flawed and are reported having to take into account the low frequency of variables and normality distribution limitations, there are still new findings to be reported. A study of this nature has never been performed before which leaves this thesis as a starting point for more refined conceptualization of war crime behaviour in ways that are comparable to studies of national crimes. It is a good starting point in highlighting the evidential potential in systematically examining the material elements of war crimes, which are used to build a case, yet there is limited knowledge of what they encompass. It therefore highlights the need for further research that will contribute to criminal investigations in this arena. It is hoped that this piece of research will develop interdisciplinary engagement between forensic, legal and psychological disciplines and provoke dialogue that will contribute to the understanding of war crime behaviour and have a positive impact on the judicial and evidential processes of the ICC.

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Appendix 1

Coding Dictionary

Variable	**Description**
Animals	The victim(s) is fed to animals ante or post mortem
Artefact Removal	The victim(s) personal possessions are removed from the body and/or home, ante or post mortem
Beat	The victim(s) is hit repeatedly on any part of the body with any type of blunt instrument (allocated when head region is not specified)
Behead	The victim(s) head is forcibly removed ante or post mortem; head specified in witness testimony
Blindfold	The victim(s) eyes are physically covered with material
Bow	The victim(s) is killed, wounded or threatened using a bow and arrow
Brain Removal	The victim(s) brain is removed post mortem
Bulldozer	Heavy machinery is used to create and/or cover a deposition site
Burn Alive	The victim(s) is burnt ante mortem
Bury Alive	The victim(s) is buried ante mortem
Cave	The victim(s) is deposited in a naturally occurring underground space
Clothes Removal	The victim(s) clothing is removed ante or post mortem
Crater	The victim(s) is deposited in pit formed as a result of an explosion
Cremate	The victim(s) is burnt post-mortem
Dismember	The victim(s) body part(s) are removed ante or post mortem; excludes behead
Drain/Sewer	The victim(s) is deposited in an existing opening used to drain water in any location
Drown	The victim(s) is submerged in water resulting in death
Electrocute	The victim(s) is subjected to an electric current
Explosives/Blast	The offender(s) used explosives
Firearms	The victim(s) is killed, wounded or threatened using a firearm of any type
Foetus Removal	The victim(s) unborn child is physically and forcibly removed ante or post mortem
Gas	The victim(s) is asphyxiated by gas
Grave	The victim(s) is deposited in an a pit excavated for the purpose of burial
Head Trauma	The victim(s) is hit on head with a blunt instrument; head specified in witness statement
Hit Against Tree	The victim(s) is picked up and hit against a tree; refers to children
Liver Removal	The victim(s) liver is physically and forcibly removed ante or post mortem
Loot	The victim(s) possessions are removed from their home, ante or post mortem

Machete	The victim(s) hit with a long bladed knife
Masus	The victim(s) hit with a club with projecting nails
Music	The offender(s) played music peri and post mortem
Penis Removal	The victim(s) penis is physically and forcibly detached prior or post death
Poison	The victim(s) ingests a toxic substance
Rape/Assault	The victim(s) is subjected to intercourse and/or unwanted sexual contact against their will
Restrain	The victim(s) body parts are bound in any form using any type of material
Stab	The victim(s) body is penetrated using a sharp instrument
Stone	The victim(s) is killed, wounded and/or threatened using stones
Strangle	The victim(s) neck is restricted or compressed using manual force
Strung Up	The victim(s) is suspended from an object by any body part
Suffocate	The victim(s) is asphyxiated using manual force
Surface	The victim(s) is deposited in the open with no concealing
Throat Cut	The victim(s) throat is slashed using a sharp instrument
Torture	The witness refers to “torture” in testimony but does not specify methods used
Warning	The offender(s) alert victim(s) of their approach through verbal and auditory methods
Water	The victim(s) is deposited in water post mortem