Combat and Capture in the Aztec Empire¹

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ABSTRACT

Aztec combat has generally been understood as similar to that of medieval Europe, employing armour, shields, bows, and broadswords that, while materially different, were comparable in form. Contemporary chronicles discuss battles and outcomes, and much about how the Aztecs fought may be gleaned from these. But pay little attention to combat at the individual level, furthering the tendency to analogise their battles to those in Europe. Assessing the nature and use of their arms and armour is indispensable, but often obscures how battles were actually fought by individuals. By delving into ancillary historical evidence, and combining that with Aztec strategic goals and the circumstances they confronted, reveals what individual combatants sought to achieve in battle and how they did so with the weapons available.

The Aztecs are among the world's best known warriors, at least in the popular imagination. The Aztec empire that extended throughout much of central Mexico and into Guatemala was created through the army's efforts, their arms and armour have been depicted repeatedly, if often rather imaginatively, and many of their conquests have been chronicled. Yet one aspect of Aztec warfare that is frequently noted but not explored is its social impact, the possibility it offered to Aztec commoners for significant social mobility.

The abrupt appearance of the Aztecs in Western consciousness gives the impression of a large empire with a mighty military, which it was, but it had not been theirs since time immemorial. Indeed, when Cortés reached Mexico in 1519, the Aztecs had only been an empire for just over ninety years. Their empire only began in 1428 when they and their allies overthrew the Tepanecs, and their then ruler, Itzcoatl (ruled 1428-

¹ I would like to thank Tim Pauketat and Logan Hassig for reading and helpfully commented on various drafts of this paper.

1440), began their imperial expansion.² The early Aztec expansion, however, was relatively modest; primarily incorporating the cities that already owed allegiance to their ally, Tlacopan.³ The first great expansion was carried out during the reign of the second emperor, Moteuczoma Ilhuicamina (ruled 1440-1468). Achieving this feat required a far larger military than could be drawn from the nobility alone, which were typically the only professionally trained soldiers in most Mesoamerican city-states. He thus instituted two major changes in Aztec society to further this goal. First, schools (telpochcalli) were established to train commoners to nearly the same military level as noble warriors. These schools produced a vastly larger trained pool of soldiers than available by drawing exclusively from the nobility, as the latter probably comprised no more than 2 to 4 percent of the population.⁴ And second, the eagle-noble (cuauhpilli)

² Fernándo de Alva Ixtlilxóchitl, Obras Históricas 2 vols. (Mexico City, 1975-77), pp. 79-80; Hernándo Alvarado Tezozomoc, Crónica mexicayotl. (Mexico City: 1975), p.108; Anales de Cuauhtitlan in Códice Chimalpopoca: Anales de Cuauhtitlan y Leyendade los Soles (Mexico City: 1975), p. 66; Robert H. Barlow, 'El Códice Azcatitlán.' Journal de la Socièté des Américanistes 1949, 38:121; Heinrich Berlin and Robert H. Barlow, (eds.), Anales de Tlatelolco (Mexico City, 1980), p.16; San Antón Muñón Chimalpahin Cuauhtlehuanitzin, Relaciones originales de Chalco Amaguemecan. (Mexico City: 1965), p.90, 93, 192; Códice Ramírez in Hernándo Alvarado Tezozomoc. Crónica Mexicana y Códice Ramírez. (1975). p.51; Crónica Mexicana in Hernándo Alvarado Tezozomoc, Crónica Mexicana y Códice Ramírez. (1975), 249; Diego Durán, Historia de las Indias de Nueva España e islas de la tierra firme, 2 vols. (Mexico City, 1967), pp.80-81; Francisco del Paso y Troncoso, (ed.), Epistolario de Nueva España. 16 vols. (Mexico City, 1939-42) vol. 10: p. 118; Joaquin García Icazbalceta, (ed.), Nueva colección de documentos para la historia de México. 5 vols. (Mexico City, 1886-92), vol. 3: p.252; Leyenda de los Soles in Códice Chimalpopoca: Anales de Cuauhtitlan y Leyendade los Soles (Mexico City, 1975) p.128; Gerónimo de Mendieta, Historia eclesiástica indiana. (Mexico City, 1971), p. 150; Bernardino de Sahagún, (Arthur J. O. Anderson and Charles E. Dibble, trans.) General History of the Things of New Spain: Florentine Codex. 13 vols. (Salt Lake City, UT, 1950-82) vol. 8: p.1; luan de Torquemada, Monarquía indiana. 7 vols. (Mexico City, 1975-83), vol. 1: pp.198-99. See also Ross Hassig, Aztec Warfare: Imperial Expansion and Political Control (Norman, OK, 1988) Ch. 10.

³ Anales de Cuauhtitlan, p. 66; Leyenda de los Soles, p.128; Paso y Troncoso, Epistolario, vol. 10: p.118.

⁴ Patricia Crone, *Pre-Industrial Societies*, (Oxford, 1989) pp.15-16; Frederic Hicks, 'The Middle Class in Ancient Central Mexico', *Journal of Anthropological Research*, 1999, 55: pp.409-11, p.419, Dave Warren, 'Some Demographic Considerations of the Matricula de Huexotzinco', *The Americas* (1971) 27: pp.255-56.

was created.⁵ Under this new social institution, commoner warriors could be elevated to the status of nobleman through martial achievement, much like being knighted in medieval Europe. To become an eagle-noble typically required capturing four enemy warriors. As this achievement brought both status and wealth, Aztec soldiers had a significant interest in taking captives. Indeed, failing to take any captive in four battles effectively ended one's military career.⁶

Though similar to European knighthood, the status of cuauhpilli had the added advantage of being hereditary, although it is questionable how many commoners were actually able to take advantage of this possibility. Nevertheless, it was the only means by which Aztec men could rise from the commoner class into the ranks of the nobility. Being a merchant might give one wealth, and becoming a priest conferred status, but only warfare offered commoner men any possibility of actually ascending in class.

Since the potential reward for taking captives was so significant, it raises the question of why it was so important in Aztec society. It has often argued that captives were needed for sacrifice to the gods who depended on their blood to sustain the world. And these captives were dedicated to the gods. But it is by no means clear that this was the reason for pursuing so many captives. In fact, the largest sacrifices by far were held during the festival of Tlacaxipehualiztli (the Flaying of Men). What made that festival so significant was not the gods to whom the captives were sacrificed, but the fact that it was at the conclusion of the annual war season and was the most important time for all of the empire's subordinate rulers to bring their tribute to Tenochtitlan. They were thus in the capital where they would witness the spectacle. In an empire that permitted their tributaries considerable free rein, the political purposes of the sacrifice, and its forceful reminder to subordinate rulers both of the might of the Aztec military and of the fate of those who rebelled or resisted the empire is apparent.

To achieve this end, the taking of captives was important as was the social change that fostered it. Yet little more is recorded about the process of becoming a noble through merit than that it was possible. Thus, to understand what was required, this individual achievement must be seen against the background of Aztec warfare in general.

⁵ Pedro Carrasco, 'Social Organization of Ancient Mexico' Handbook of Middle American Indians (1971) 10:354-57; Durán, <u>Historia</u>, vol.1: pp.113-14.

⁶ Sahagún, General History, vol.8: p.76.

⁷ Durán, Historia, vol. 2: p.172; Sahagún, General History, vol. 2: pp.3-4.

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The well-trod topic of how Aztec wars were conducted will be examined first for context. Then the largely ignored subject of individual combat will be explored. But rather than simply describing the mechanics of individual battle, its tactics and goals are presented in a larger social context that helps explain how and why these were adopted.

Despite their popular image, the Aztecs were not a society continually at war, although they were involved in numerous conflicts. There were professional soldiers, but most of those who comprised the Aztec armies were not. As an agrarian society the Aztecs relied on drafts of commoners to reconstitute its armies when needed. These men were only available seasonally. They could not be taken from the fields during the agricultural seasons without seriously injuring Tenochtitlan's domestic economy. Furthermore, their agriculture was patterned by central Mexico's rainy season, which begins in late-May or early-lune and extends into September. As a result, it was infeasible to draw large-scale drafts of men during the rains, when the fields were cultivated, or in the harvest period in the weeks that followed. Even if it had been possible to recruit during this period the food supplies to sustain them in the field were scarce until after harvest. Thereafter, supplies were at their most ample, with consumption necessarily depleting stockpiles during the following year. Therefore, not only was the most labour available for war service after harvest, but so too were the needed agricultural surpluses. Furthermore, the rains and resulting runoff in the planting and harvesting periods meant that dirt roads would be impassable for large bodies of men whose marching would soon churn them into mud, and the ordinary streams and dry washes would be filled and swollen, making passage difficult if not impossible. It was these practical concerns that patterned Aztec war season, so that it began in early December and ended in early April. Only then could large bodies of men be drawn from the ranks of the commoners in an orderly rotation as part of their tributary obligations.8

As for the battles themselves, many are recorded in colonial histories, most as simple facts of conquest rather than in lengthy descriptions that might illuminate specific tactics in each encounter. General army tactics are known, however, including the standard order of battle, and the goal which was simply to conquer the opposing city or obtain

⁸ Carrasco, 'Social Organization', pp.351-56.

its submission. To that end, the Aztec were not concerned with simply demonstrating their martial superiority. They were goal-oriented and had no hesitation in employing ambushes, feigning withdrawals to lure the enemy into compromising positions before counterattacking, as well as using scouts to bribe local traitors into revealing routes which could then be used to send forces into the city from an unexpected direction to attack an opposing army. As effective as these tactics were, none especially redound to the honour of the individual combatant.

So the question remains, how did the individual Aztec soldier fight? Despite the numerous records of cities conquered, there is remarkably little information about individual Aztec combat, what their goals were in fighting, how these affected their combat style, and what their combat options were.

Such information is often gleaned archaeologically from the detritus of wars, the bones of the fallen, and the surviving depictions of battles in other archaic empires. But despite the Aztecs being one of the best-known pre-European contact cultures, there is little such archaeological evidence in their case. The Aztec capital of Tenochtitlan remains largely unexcavated beneath modern-day Mexico City, as much of it is covered by colonial buildings which are also of historical importance and not likely to be removed. Numerous objects have been recovered, notably stone sculptures, and the ceremonial centre of Tenochtitlan's adjacent sister city of Tlatelolco has been excavated, as has a limited portion of Tenochtitlan's, but little else. And as the Aztecs primarily practised cremation, only few and scattered skeletal remains have come to light. What is known of the Aztecs comes overwhelmingly from historical documents, chronicles, and pictorial depictions. Yet too often, that which is not directly recounted in colonial chronicles is passed over, which includes individual combat.

Reconstructing Aztec Combat

Attempting to understand individual combat when faced with a dearth of information involves an exercise in historical sleuthing — teasing out the data from accounts not obviously intent on revealing it. Moreover, the effort requires greater consideration of the surviving records than simply accepting them at face value.

All historical reconstructions present problems, but wars for other archaic empires frequently offer far better evidence upon which to base an analysis. Among these are surviving examples of the arms and equipment, maps, battle orders, drawings, as well as the recollections of participants of varying reliability and the physical remains of the combatants. Nevertheless, the disparity between the amount of data and the detail available for archaic empires compared to Western and other Great Culture warfare is often mind-boggling to those of us who deal with historic non-Western conflicts.

Despite our considerable general understanding of Aztec society, battles are a case in point in the superficiality of the available evidence.

Very few Mesoamerican codices survived the military onslaught of the Spaniards and the cultural and religious re-education that followed the Conquest. Our understanding of Aztec warfare depends almost entirely on accounts compiled shortly after the conquest of Mexico and in the ensuing decades of the sixteenth-century, mostly by Spaniards, but also on drawings (which are typically highly stylised) and, rarely, on pre-Conquest sculptural depictions. Elsewhere, archaeology is a frequent handmaiden to the process, excavating weapons, reconstructing fortifications, and unearthing battlefield remains. Unfortunately, this is not the case with the Aztecs.

The arms and armour that frequently survive in museum collections and armouries are not significantly available for the Aztecs. A few Aztec shields are preserved in museum collections, but these elaborately decorated examples are most likely ceremonial rather than functional shields. A number of atlatls (dart-throwers) survive from Mesoamerica, which are also typically elaborately decorated examples that have been preserved as art. Aside from stone blades and projectile points, no examples of Aztecor Conquest-era bows, arrows, atlatl darts, broadswords, thrusting spears, or quilted cotton armour have survived to the present. Therefore, the task of understanding Aztec combat falls to written accounts, pictorial depictions, and, most importantly, imaginative insights into assessing them. Initially, that falls to what is known of Aztec arms and armour.

Arms and Armour

The Aztecs employed a range of offensive arms, including both projectile and shock weapons. Among their projectile arms were slings and slingstones, which were many thousands of years old; and bows and arrows, which had only reached central Mexico from the north around the 12th century A.D.⁹ Both of these projectile weapons were used at a distance to initiate battles and to support front-line hand-to-hand combatants. Shorter range darts thrown by atlatls were also used. These were also many thousands of years old, but while they had been the primary projectile weapons in earlier empires, by Aztec times, their long-range roles had been coopted by slings and bows, and were now used as close-up projectiles. The atlatl-launched darts were thrown with great force at a distance of perhaps no more than 40 metres while the opposing forces closed. Front-line combatants could throw four or five at most before closing for hand-

⁹ Ross Hassig, War and Society in Ancient Mesoamerica, (Berkeley and Los Angeles: 1992), pp.176-77.

to-hand combat, but the darts could inflict considerable damage, with the ultimate aim of breaking the opponent's formation. Reputecly, atlatls could penetrate armour and still inflict a fatal wound, especially at close range. Bows and arrows could also be deadly and, like atlatls, cause puncture wounds. Slings, by contrast, relied on impact for effect. But all of these projectile weapons were primarily important in the opening moments of conflict while the two sides closed for hand-to-hand combat which dominated Mesoamerican battles.

Once the two sides closed, projectile arms were of secondary use as combat became hand-to-hand, primarily employing oak broadswords (<u>macuahuitl</u>) and thrusting spears (<u>tepoztopilli</u>), both edged with obsidian blades. ¹⁰ Although as a volcanic glass, thin obsidian blades may be broken in combat, they are far sharper than steel blades and can easily cleave flesh. But given their placement in relatively thick oak bases, these broadswords could slash but not thrust to penetrate the enemy.

The macuahuitl was a relatively new innovation either created by the Aztecs, or quickly adopted and spread by them. Earlier empires had primarily employed spears and atlatls, with the first "swords" being introduced by the Toltecs as early as 900 A.D. These, however, were relatively short and curved and were paired with atlatls. The Toltecs were also lightly armoured and probably very mobile, using shields or quilted cotton armour covering only the left arm. The Aztec sword was far longer, straight, and had a greater reach. Expression of the straight of the probability of the probability of the straight of the probability of the

By the time Cortés arrived, the broadsword was common in central Mexico but apparently had not yet spread far beyond. Spanish conquistador accounts give the impression that the Maya also had them, since they reported they were attacked by macanas. It is assumed that the macana is the same thing as a macuahuitl since the Spaniards subsequently applied the same word to both, but the Spaniards had picked up the former term in the Caribbean. Macana, however, is a Taino word for a digging stick, which the Spaniards brought from the West Indies, and it is likely that most of the Maya combatants encountered were commoners carrying digging sticks as

¹⁰ For studies of Aztec arms and warfare, see Marco Antonio Cervera Obregón, *El Armamento entre los Mexicas*, (Madrid, 2007) and Hassig, *Aztec Warfare*.

¹¹ Códice Borgia. 4 vols. (México City, 1980) vol. 3: p.13, 49, 63, 64, 70; José Antonio Zambrano, La Zona Arqueológica de Tula. (Mexico City, 1985), p. 63.

¹² For a fuller discussion of the history of development of arms and armour throughout the 2500 years of indigenous Mesoamerican warfare, see Hassig, *War and Society*.

¹³ Hassig, War and Society, p.213 and n768.

weapons, much like English peasant drafts carried bow and bills, the implements of their everyday occupations. ¹⁴ This conflation in labels and the fact that there is no recorded Maya word for sword suggests that the macuahuitl had not reached them or had not yet been adopted. The rather limited spread of the macuahuitl, coupled with the lack of its precolumbian depiction in either sculpture or codices, suggest a recent adoption, perhaps within decades of the Spanish conquest.

A variety of bladed and unbladed clubs were also employed in Aztec times, as they had been for at least two thousand years. These clubs were employed primarily by less sophisticated militaries, suggesting they were used because they required less training and expertise. The most sophisticated Mesoamerican armies, however, conducted hand-to-hand combat almost exclusively with broadswords and secondarily with thrusting spears.

Wounds and Effect

Having recounted the arms and armour in use by the Aztecs, the question becomes, how effective were they? Aztec projectiles could inflict puncture wounds, but their primary hand-to-hand arms could paradoxically primarily inflict only slashing wounds which were less serious medically, as they rarely penetrated the body cavity. The difference in lethality of punctures versus slashes rests on the medicine of the day, both in Mexico and in Europe. Neither coped well with infections introduced to internal areas or their especially vulnerable organs, such as the stomach or intestines. Wounds could be sutured and bones set, but internal infections were essentially untreatable and usually fatal.¹⁵ Consequently, a thorough familiarity with wounds and their lethality guided Aztec defensive measures.

To counter potential wounds inflicted by combat arms, Aztec soldiers employed a variety of defensive armour. Shields made of reeds or wood sheathed in leather were the most common, usually with a hanging feather fringe. ¹⁶ Typically carried by a strap

¹⁴ Barbara A. Purdy, 'Weapons, Strategies, and Tactics of the Europeans and the Indians in Sixteenth- and Seventeenth-Century

Florida.' Florida Historical Quarterly (1977) 55: p.264.

¹⁵ William Flack Stevenson, Wounds in War: The Mechanism of Their Production and their Treatment, (London, 1897), pp.98-101, 295, 317, 328.

¹⁶ Manuel Carrera Stampa, 'The Evolution of Weights and Measures in New Spain' Hispanic American Historical Review (1949) 29: p.10.

on the left forearm and held by that hand, shields were used defensively both to block and parry an opponent's blows. Body armour of quilted cotton up to two inches thick was also used in the form of a sleeveless jacket that covered the trunk from the neck to at least the waist but usually as far down as mid-thigh.¹⁷ Although full body armour had a long pedigree in Mesoamerica, beginning as early as 400 A.D., it was soon discontinued, perhaps because the cumbersome full-body suits restricted the wearers' mobility in combat, but perhaps equally owing to the expense. 18 Cotton was grown primarily in the tropical lowlands of Mexico, so it had to be grown, processed, and then imported into the highlands of central Mexico, which made this strategic material so expensive in Tenochtitlan that it was often the subject of tribute demands. In areas, such as the Tarascan empire to the west, cotton was difficult and costly to obtain consequently many of their warriors wore armour made of maguey; the straight fibres of which lacked the natural resilience of the curly cotton equivalent. 19 The Aztecs adopted only quilted cotton jerkins, which protected the trunk and its vulnerable body cavity. In all likelihood, at least for commoners, this armour employed the thickest cotton only on the front, with either thinner cotton or lesser fibres on the back, where they were unlikely to be struck. |erkins thus protected the most vulnerable areas of the body yet were cheaper than full body armour and, as they covered neither the arms nor legs, did not impede mobility.

Over this armour, veteran warriors who had earned the right wore suits that covered the arms and legs in long sleeves and leggings.²⁰ These unarmoured suits were made of feathers sewn on a fabric backing, or of animal hides depending on the wearer's status. Tunics and kilts were occasionally worn by non-Aztec warriors, and helmets of various types were worn by a minority of soldiers.²¹

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¹⁷ Patricia Rieff Anawalt, Indian Clothing Before Cortes: Mesoamerican Costumes from the Codices (Norman, OK, 1981), pp.39-46; Eduard Seler, Gesammelte Abhandlungen zur Amerikanischen Sprach-und Altertumskunde. 5 vols. (Graz, Austria, 1960), vol. 2: pp.546-47, 575,77.

¹⁸ For ceramic examples, see Warren Barbour, 'The Figurines and Figurine Chronology of Ancient Teotihuacán, Mexico' (Ann Arbor, MI, 1975).

¹⁹ René Acuña, (ed.) Relaciones geográficas del siglo XVI. 10 vols. (Mexico City, 1982-87) vol. 9: p.200, 225; José Corona Núñez, Relaciones Geográficas de la diócesis de Michoacán, 1579-1580. 2 vols. (Guadalajara, México, 1958), vol.2: p.113; Relación de las ceremonias y ritos y población y gobierno de los indios de la provincia de Michoacán (1541). (Morelia, Michoacán, México, 1977), p.192.

²⁰ Anawalt, Indian Clothing, p. 11, 55-56.

²¹ e.g., Codex Ixtlilxochitl. (Graz, Austria, 1976), fol. 106r.

Wars fought with these arms and armour are depicted in native codices, screen-fold books of deerskin or ficus-bark paper on which histories, rituals, and other matters were painted. The early colonial codices were largely copied from prehispanic examples and are often presented in annal form, listing each year with its most significant events, if any. Typical among such chronicled events are conquests of other cities, which are usually indicated by a burning temple and place-name glyph²² or by an Aztec warrior grasping the forelock of a captured warrior with an accompanying town glyph.²³ Even less graphically, war itself is often simply indicated by a shield over crossed atlatl darts.

In the few depictions of combat, warriors are shown with shields forward and swords raised to deliver a blow.²⁴ It is on such colonial-era depictions that our understanding of Aztec combat is primarily based, despite being second-hand records and descriptions by chroniclers who arrived in Mexico long after the colonial conquests were over and who therefore had little or no actual experience with pre-Columbian warfare. Even those who did, such as the conquistadors, offer few insights into individual combat. Thus, much of what we believe we know about Aztec conquest is based on later colonial depictions, or is analogised from late-medieval European weapons and practice. The latter also appears to be the basis for the colonial depictions of opposing warriors with swords upraised in preparation for a downward blow. Such sword fights by armoured opponents in the Western tradition generally result in wounds to the head, neck, and upper left extremity.²⁵ But analogising this to the Aztecs assumes that their arms and armour, which are superficially similar to medieval European examples, were employed in similar ways, and only in those ways. Yet this remains an assumption rather than a demonstration based upon similarity alone. But can the idea that the Aztecs fought as assumed be assessed in the absence of better directly relevant evidence? And more importantly, are there any alternative ways to reach some understanding of how

²² See Francis F. Berdan and Patricia Rieff Anawalt, (eds.) *The Codex Mendoza*, 4 vols. (Berkeley and Los Angeles, 1992), vol. 3:fols. 2v-16v.;

²³ Eloise Quiñones Keber, (ed.), *Codex Telleriano-Remensis*, (Austin, TX, 1995), fol 34v; Esther Pasztory, Aztec Art, (New York, 1983) pp. 147-50.

²⁴ e.g., Alfonso Caso, 'Mapa de Popotla' Anales del Instituto Nacional de Antropología e Historia, 1947, época 5, 2:315-20; Códice de Huamantla 1984; Códice de Huamantla. 2 vols. (Tlaxcala, Mexico, 1984).

²⁵ Stevenson, Wounds in War, p.98.

an individual Aztec soldier actually fought in battle? It might be presumed that so doing is strictly an exercise in imagination without realistic foundation. Yet despite the paucity of direct evidence, there are some well-documented Aztec practices and goals that, if considered thoughtfully, may help reveal their combat style. The most direct of these is their arms and armour.

Arms and Battle Goals

If the combat goals of the Aztecs were the same as those of medieval European soldiers, this assumed combat style would be the most plausible explanation of how they fought, and in some cases, such an assumption might be justified. For example, when King Ahuitzotl (1486-1502) sent his army on a retaliatory expedition against cities in the distant Tehuantepec region in 1497, he ordered his soldiers to take no prisoners. ²⁶ In such a punitive war, Aztec goals and those of European armies might be quite similar and therefore so too might be their use of arms and armour. But in most Aztec battles, capture was a significant objective, although one that is perhaps overestimated in the literature. Capture was also practised in medieval Europe, but usually only of kings or perhaps high nobles, for the purpose of holding them for ransom. Such was not the case with the Aztecs.

Veteran Aztec warriors who had already gained all the benefits that recognition could provide from numerous previous captures may have focused more on killing their opponents than on capturing them, which was often more difficult and more dangerous.²⁷ This appears to have been especially true among the knightly orders of jaguar and eagle warriors. Most of these were nobles who had taken at least four captives in battle to achieve that status, an important prerequisite for political positions. But once achieved, their incentive to take more captives diminished.

This evident paradox is suggested by the presence of two even higher knightly orders, the Otontin and the Cuachicqueh.²⁸ To achieve the former status, more than fifteen great feats of battle had to be performed and for the latter, twenty. But the members of these two knightly order were uninterested in political office and for their valour in

²⁶ Alvarado Tezozomoc, 'Crónica Mexicana' in *Crónica mexicana y Códice Ramírez* (Mexico City, 1975), p. 541; Diego Durán, *Historia de las Indias de Nueva España e islas de la Tierra Firme*. 2 vols. (Mexico City, 1967) vol. 2: p.360.

²⁷ Ross Hassig, 'Peace, Reconciliation, and Alliance in Aztec Mexico' in Kurt A. Raaflaub, (ed.), War and Peace in the Ancient World, (2007, Oxford) pp.312-28.

²⁸ Durán, Historia de las Indias, vol. 1: p.114.

battle (they were the first in and the last out) without regard for personal advancement, they were considered crazy, like Viking berserkers.

It appears that jaguar and eagle warriors were content with their knightly statuses and while still great warriors, probably did not seek to become Otontin or Cuachiqueh, as their current situations provided them with political promise which the more elite classes did not. Nevertheless, novice and younger warriors who still lacked status had something to prove and therefore had a decided incentive to take captives alive. These incentives, along with the emergent Aztec empire, had developed relatively quickly.

King Ahuitzotl's attack on Tehuantepec was unusual primarily because it was so distant. Orders not to take prisoners were uncommon in Aztec history, and they reveal a persistent difficulty in Aztec warfare and especially in taking captives and returning them to Tenochtitlan: the friction of distance.

Although as described thus far, it would appear that the Aztecs simply marched off to war. But archaic Mesoamerican states and empires suffered from the greatest transport constraints of any in the world which significantly affected not only their size and expansion, but their combat practices as well.

When the Aztec empire first began, its battles were fought largely in and around the Valley of Mexico. Because these cities were clustered around an expansive lake system that filled the valley, canoes offered rapid, large-scale transport.²⁹ But beginning in the mid-15th century, the Aztecs expanded well beyond the valley where the friction of distance took an enormous toll.

There were neither draft animals nor wheeled vehicles in pre-Columbian Mesoamerica, so all overland transport was by foot. While an individual can walk with some speed, march dynamics for large bodies of men differed, and the typical Aztec army of 8,000 men (a xiquipilli), could only average about 20 kilometres per day over the dirt roads.³⁰ These roads effectively defined the army's maximum width with columns restricted to two men abreast at chokepoints, such as river crossings or passes, if not everywhere. Consequently, an 8,000-man Aztec army marching in pairs would be 4,000 men long. With each man occupying one square metre and requiring at least two additional metres between men, front to back, their columns stretched out for a minimum of 12

³⁰ See Hassig, Aztec Warfare, Ch. 5.

²⁹ Joaquín García Icazbalceta, *Colección de documentos para la historia de México*. 2 vols. (Mexico City, 1971), vol. 1: p.359; Torquemada, *Monarquía Indiana*, vol. 4: p.346-47.

kilometres. Since multiple armies were typically dispatched, each 8,000-man army therefore began marching on a separate day, not for ritual purposes, but for the simple reason that a second army could not begin moving until so late in the day that they could not reach that night's camp until long after sunset. This difficulty was mitigated to some extent by sending multiple armies along different roughly parallel routes simultaneously, and meeting days later at a pre-planned location near the target.

These march rates were further constrained by the complexity of Mesoamerican logistics, as all supplies had to be carried by foot. Professional porters (tlamemes) using tumplines which supported backpacks carried an average of 23 kilogrammes, could travel in small groups at least 25 kilometres per day when traveling alone or in small groups.³¹ But when used for logistical support, tlamemes could travel no faster than the army they accompanied. And many tlamemes did accompany the army, with the most favourable ratio being one porter per every two soldiers. 32 The soldiers themselves may have carried some food, but they were already burdened with their own arms, armour, clothing, blankets, and other supplies, so any food they might have brought would necessarily have been minimal. The porters would have carried 23kgs, but as each adult man consumed a kilogramme of maize a day, the two soldiers and supporting tlameme would have consumed at least three kgs. per day, limiting his and two dependent soldiers' supplies to about eight days total. And as no supplies could be guaranteed at the end of the trek, the supplies they carried with them limited their range to four days' march round-trip. And at 20 kilometres per day, that gave the Aztec army a dependable combat radius of 60 kilometres, three days there, one day of combat, one for recuperation, and three days return.

The Aztecs partially overcame these logistical limits by demanding that their tributaries set aside fields on which they were to grow food for the armies. Then, when the Aztecs launched a campaign, a runner was sent two days in advance along the anticipated line of march to alert their tributaries, who then had two days to gather the food and have it available when the main force arrived.³³ These added resources allowed the armies to extend their combat radius considerably, and at the same time, their tributary expansion meant that Aztec armies would travel through subordinate areas with guaranteed supplies, while hostile groups could not reliably penetrate through to threaten Tenochtitlan.

³¹ Ross Hassig, Trade, Tribute, and Transportation: The Sixteenth-Century Political Economy of the Valley of Mexico. (Norman, OK, 1985), pp.32-34.

³² Hassig, Aztec Warfare, p.30

³³ op. cit., 12.

These logistical constraints had an immediate impact on Aztec siegecraft. Once a targeted city was reached, every day the city was besieged consumed scarce foodstuffs. Therefore, Aztec battles tended to be relatively brief. Although ladders were built to assault city walls, because the Aztecs could not remain in the field for great length of time, siege warfare was not well developed beyond the Valley of Mexico.

It is easy to understand how such logistical constraints affected Aztec strategy, but it also affected individual combat for those soldiers seeking to take captives. These limitations not only affected how captives were transported back to Tenochtitlan for eventual sacrifice, but also how one fought them.

Taking captives may seem simple, especially when viewed in light of medieval European warfare, but removing them to Tenochtitlan without draft animals nor wheeled vehicles was enormously problematic. The Aztec dead remained at the battlefield and were cremated, but everyone else, captives included, necessarily had to walk back to the capital, often over great distances.

On the march, captives' arms were bound, usually behind their backs with rope tying just above the elbows, or they wore a wooden yoke, called an eagle necklace (cozcacuauhtli), which did not prevent walking but would have made flight very difficult.³⁴ The journey itself, however, could take many days, depending on distance, with all the logistical difficulties such a trek entailed.

That the Aztecs took captives is interesting, but the relevant question here is, if taking them was a major goal, surmounting that of killing enemy combatants, how did that affect combat and potentially, how could a badly wounded captive manage the trek back to Tenochtitlan? As noted, the sixteenth-century historical accounts offer little direct answer. So rather than searching through the well-worn records of Aztec military practices yet again, instructive information is available by turning to noncombat evidence of their broader cultural practices.

Ancillary Evidence of Combat Practices

As with many early empires, the Aztecs had a series of sumptuary laws restricting what one could wear by class and status. Although sumptuary laws in Mesoamerica undoubtedly predated the rise of the Aztec empire, Moteuczoma Ilhuicamina is nevertheless credited with implementing many new ones in Aztec society, some of

³⁴ op. cit., 8-39

which related to warfare. Among these restrictions, only the king could wear a golden diadem in the city although all the great captains and lords could do so in war as there they represented the king. Only nobles and valiant warriors could wear sandals in the city; only nobles could wear plugs of gold and precious stones in their lips, ears, or noses, but great warriors could wear those of bone or wood; common soldiers could wear only the simplest type of mantle, and no cotton clothing. And of course, the garb of the military orders was restricted by achievement in battle and subsequent formal recognition, just as rank and medals are in modern armies.

These and other sumptuary laws were aimed at maintaining differences in social status which were reflected in clothing and other adornment, but they indicated little else. One such restriction, however, nevertheless throws light on Aztec individual combat: wearing long breechcloths. Breechcloths were everyday male garb in Mesoamerica and were therefore ubiquitous among commoners and nobles alike, but long breechcloths that covered the legs were reserved exclusively for veteran warriors. Commoners were entitled to wear breechcloths that extended only so far as to cover the knees. Wearing ones that extended down to the ankles without being entitled was an offense nominally punishable by death. When a commoner was seen wearing a long breechcloth, it could be lifted to check the legs. If the wearer's legs bore war wounds, it showed that he was entitled to wear the long breechcloth. If not, the wearer could be put to death.³⁶

Evidence of combat was the prerequisite for wearing this particular garb, and even though the wearer's head and most of his upper body and arms were usually visible in everyday garb, the focus was on the legs, especially the lower legs strongly suggesting that wounds there were the diagnostic feature of combat. How, though, does this relate to what is otherwise known about Aztec warfare and why would the legs be a particular locus for war scars over any other part of the body?

Reassessing Individual Aztec Combat

If the primary goal in Aztec combat was to kill the opponent rather than to capture him, wounds might be inflicted on any part of the body. The trunk is an unlikely place to look, as the soldiers wore heavily protective cotton armour. The head, arms, and legs, however, were all unarmoured and would presumably be equally likely targets. Yet apparently, the head and arms were not, only the legs were. This selective targeting

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³⁵ Durán, Historia, vol. 2: p.195.

³⁶ Alvarado Tezozomoc, 'Códice Ramírez' in *Crónica mexicana y Códice Ramírez* (Mexico City, 1975), p. 76; Durán, *Historia*, vol. 2: pp.211-12.

of the legs requires an examination of how individual soldiers must have wielded their swords.

Most Aztec warriors were right handed, as is true of the general population worldwide. Soldiers therefore typically carried their shields on their left forearms so parry fractures occur when the blow of an opponent's weapon is blocked by the shield; the cutting edge may be blocked, but the impact of the blow is not, and its force is transferred to the arm holding the shield. Thus breaks to that limb would be expected in combat, yet the Aztecs did not examine the left forearm to determine combat experience, perhaps because such injuries left no cuts or subsequent scars and were thus not obvious once the bones healed. The right arm would not be subject to the same type of injury as that hand carried the sword which was used both to strike the opponent and, less often, to parry the enemy's blows. Using the sword to parry, however, is unlikely to be preferred as it prevents an immediate counterstrike. Nevertheless, by taking the force of a blow on the blocking sword, the right arm is not subject to parry fractures. Unfortunately, this is only a logical assessment, as the paucity of Aztec remains makes it impossible to verify empirically. Nevertheless, the logic of Aztec combat and their focus on the legs strongly supports this assessment. But a further examination of the logic of battle suggests the reason for focusing on the legs.

The mechanics of delivering a sword blow are fairly straight forward. When a soldier already has his sword drawn back or is drawing it back, his weight is on, or shifts to, his right (rearward) leg and off his left (forward) leg. This shift of weight may be evident to an opponent who would then anticipate a blow unless that shift in weight could somehow be obscured, and that, I suggest, is achieved with the shield. The hanging feather fringe on the shield, which extended at least thirty millimetres, partially obscured the left leg so a forward movement of the shield toward the opponent may not have always signalled an impending sword blow. An abrupt forward movement of the shield could also be used as a feint to throw the opponent off balance and obscure the fact that there had been a shift in weight from one leg to the other in preparation for striking. Such a move would make it appear that the soldier who was attacking was about to begin a sword blow and would thus draw off the opponent, causing him to prematurely raise his shield and thereby expose his own legs.

When the Aztec soldier actually delivered a blow, he stepped forward with his rear (right) leg, during which his body weight shifted to the left (forward) leg, in order to bring most of his weight to bear. Unless obscured, such movements are evident to the opponent who can then anticipate them correctly. But what is the target? The macuahuitl was a very effective weapon. Its obsidian blades could easily cut through a considerable mass of tissue and muscle. Bones, however, proved to be more difficult, in large part because the obsidian blades were vulnerable to breakage especially when

striking hard surfaces. This shortcoming was compounded by the wooden base into which the blades were set. Although the wood was bevelled to minimise its width at the cutting edge, being wood, it necessarily remained thick enough to accommodate a groove two to three millimetres wide cut along its length into which the blades were set. The wood also had to be thick enough to provide lateral support to the blades. Thus, even if the blades could cut into the bone, they extend no more than four or five millimetres from the wooden base before the abrupt thickness of the wood impedes any further penetration through bone. Unlike flesh, which parts when sliced so the thickness of the macuahuitl's base would meet with little difficulty, bones do not.

Spanish accounts record that Indian swordsmen could take the head off a horse with a single blow. This claim may have been an exaggeration, to which the Spaniards were prone as the greater the reported difficulties and dangers they faced the greater the rewards they hoped to gain from the king when word of their exploits reached him. But the claim may also have been true. If so, however, that particular blow must have been fortunate in missing the bones to slice between the vertebrae. If the bones were thus avoided, the remaining flesh would have posed little obstacle.

The human leg, however, contains some very thick bones. The upper leg is supported by a single bone, the femur, which is the thickest long bone in the human body and is relatively robust. It is also apparent from which part of the leg the Aztecs examined to determine eligibility to wear a long breechcloth, that the upper leg was not a primary target in war. Moreover, the femur was probably too easily protected by the shield and by the longer jerkins to be a likely target and, even if cut down to the bone, a blow there would not necessarily result in an incapacitating wound.

The lower leg, however, has two supporting bones, the thicker tibia and the markedly thinner fibula. Unsurprisingly, in a study of one medieval European population, the fibula was the most frequently fractured bone in a preindustrial society.³⁷ The much thinner fibula is generally regarded as a non-weight-bearing bone, but the leg does not depend exclusively on the more robust tibia.³⁸ The fibula does bear some weight and also serves

³⁷ M. P. Djurić, C. A. Roberts, Z. B. Rakocević, D. D. Djonić, and A. R. Lesić, 'Fractures in Late Medieval Skeletal Populations in Serbia' *American Journal of Physical Anthropology* 2006, 130(2):167-78.

³⁸ C. J. McNeil, G. H. Raymer, T. J. Doherty, G. D. Marsh, and C. L. Rice, 'Geometry of a Weight-bearing and Non-weight-bearing Bone in the Legs of young, Old, and Very Old Men', *Calcified Tissue International*, 2009, July 85(1): pp.22-30.

to stiffen the tibia.³⁹ But how much weight the fibula supports depends on the leg's position. It bears only 6.4 per cent of the total load when a person stands upright, and a maximum of 19 per cent when a person moves the leg to other positions, as when walking.⁴⁰ Yet aside from being the thinnest and therefore the most vulnerable of the three leg bones, it was also the most exposed in combat.

In attempting to strike an opponent with the broadsword, the soldier brought his weight forward on the left (forward) leg. At the same time, his opponent's left arm bearing his shield was raised to counter the anticipated blow. In so doing, the opponent was forced to move his left leg forward to support this shift in his own weight as his body moves forward to receive the blow. Moving in this manner exposed the left side of the enemy's body, including his left leg, which has come forward to bear more of his own weight, and was then most exposed and became the likeliest, unarmoured and unshielded target.

The limitations of macuahuitl construction may have prevented severing the tibia, and perhaps even the thinner fibula. But located on the exposed outer side of the leg, the fibula would bear the brunt of the sword's impact and if not cut through, the thin impacting edge of the oak sword would almost certainly break the relatively fragile bone. At the same time the defender's left leg and tibia was thus exposed, once the attacker delivered the blow, his own left leg, the one most vulnerable to a counter blow, was now rearward keeping it almost entirely from harm.

Why, though, would it matter which wound brought the enemy down? The answer to that question bears on the need to take captives. At any land distance, since there were no wheeled vehicles or draft animals, captives had to be able to walk themselves back to Tenochtitlan. A wound that incapacitated the enemy would also render him incapable of walking, and without another means of conveying him to the capital, he

³⁹ P. Cornelissen, P., M. Cornelissen, G. Van der Perre, A. B. Christensen, F. Ammitzbøll, and C. Dyrbye, 'Assessment of Tibial Stiffness by Vibration Testing in Situ-II. Influence of Solid Tissues, Joints and Fibula', *Journal of Biomechanics*, 1986, 19(7): pp.551-61; Damiano Marchi, 'Relative Strength of the Tibia and Fibula and Locomotion Behavior in Hominoids', *Science Digest* (2007) 53: pp.647-55; Damiano Marchi and Colin N. Shaw, 'Variation in Fibular Robusticity Reflects Variation in Mobility Patterns', *Journal of Human Evolution*, 2011, 61: pp. 609-16.

⁴⁰ Marchi and Shaw, op. cit.; K. Takebe, A. Nakagawa, H. Minami, H. Kanazawa, and H. Hiroghala, 'Role of the Fibula in Weight-bearing', *Clinical Orthopaedics and Related Research*, 1984, April (184): pp.289-92.

lacked value for the captor's social advancement. The goal, then, for those seeking captives, was to strike the enemy in such a way as to render him incapable of further resistance, but not to inflict such a debilitating injury that he could not walk.

A broken fibula is painful, and a blow that cut through or even just fractured the enemy's fibula would likely drop him on the spot, where he could be seized and bound. But despite the often excruciating pain, the injury would not prevent him from walking.

The basic Aztec tactic in individual combat was thus to aim for the lower leg, which, in right-handers would be most exposed, and right-handed blows would most easily strike. This happy congruence between right-handed warriors also explains why left-handed warriors were so disliked: their foremost legs would be on the opposite side from a right-handed strike, and left-handed blows aimed at their opponents would strike the armed but not shielded side.

Being acutely aware of this tactic did not mean that Aztec warriors or their opponents could exclusively guard against an attack from their left. Broadswords dominated the battlefield, but thrusting spears were also used, although their role in combat remains less clear. Spearmen were a minority of the combatants, and while right-handed spear wielders could favour a blow from their opponents' left, a right-sided strike was also feasible. But as a two-handed weapon, the thrusting spears' wielders either carried no shield, rendering them vulnerable to an attack from their left, or they carried one on their left forearm but could not use it effectively without releasing their left hand from the base of the spear, thereby rendering it useless even to parry. Indeed, it is likely that thrusting spears were used primarily in support of swordsmen, and were probably massed in the rank behind them.

Although the emphasis here has been on individual combat, as long as an opponent's formation remained intact, both his left and right would be guarded by the soldier on either side. Thus group protection was no doubt a primary concern of both sides, minimising the effectiveness of attacks from their left.

The existence of leg wounds on soldiers who have returned to Tenochtitlan testifies that this fundamental sword tactic must not always have been effective. A partially blocked or weak blow would still cut but not necessary fracture a fibula, so the soldier could recover and even prevail. But there are also alternatives to being captured even with a shattered fibula.

Some soldiers may have managed to avoid capture even after their fibulas were fractured provided they were not toppled by the break. Alternatively, the group tactics involved in formations may have been for saving compatriots whose fibulas were

fractured in battle. And a successful battle might have involved the recapture of Aztec soldiers who had been taken by the enemy. There are so many ways to evade capture, even with a fractured fibula, that taking captives was a difficult undertaking, as is evident from the fact that the Aztecs gave partial credit for shared captures by up to four soldiers.

Aztec tactics and the Spanish Conquest

It might be thought that the arrival of the Spaniards in 1519 marked a watershed in Mesoamerican combat and that such individual tactics as attacking the lower legs were completely outdated in the face of European arms and tactics and thus abandoned. But whatever long-term impact European arms and tactics may have had, the question remains, what impact, if any, did this tactic have on the course of the Spanish conquest of Mexico?

It is incontestable that the Western military technology the Spaniards brought with them, which included cannons, arquebuses, crossbows, horses, iron armour and steel swords, was superior to the native arms and armour in many ways. Yet, as I have argued elsewhere, although the Spaniards were pivotal in the Conquest, it was not for the reasons usually suggested. They were such a small proportion of the forces ultimately arrayed against the Aztecs, comprising no more than I per cent of the total combatants, that the vast majority of anti-Aztec forces were other natives, primarily Tlaxcaltecs and Acolhuas. The importance of the Spaniards, which was first recognised in a meaningful way by the Tlaxcaltecs, was their ability to punch through and disrupt native formations so that they could not sustain an attack. This recognition offered the Tlaxcaltecs a way to harness the small Spanish forces to their own vastly larger ones and potentially defeat the Aztecs, with whom they had been locked in a long-term and losing struggle. 41

Since both sides of this indigenous conflict used similar arms, armour, and tactics, the main obstacle to either side securing a major victory was their inability to break through the opposing front lines. But a series of battles with the Spaniards when they first entered Tlaxcaltec territory brought home the realisation that they would not maintain their own formations in the face of Spanish arms--primarily falconet, arquebus, and crossbow fire, all of which had greater range and greater penetration than their

⁴¹ Bernal Díaz del Castillo, *Historia verdadera de la conquista de la Nueva España*. 2 vols. (Mexico City: 1977), vol. 1: pp.225-27; Francisco López de Gómara, *Historia general de las Indias*. 2 vols. (Barcelona, 1965-66), vol. 2: pp.115-16; Andrés de Tapia, 'Relación de Andrés de Tapia' in Agustín Yáñez, *Crónicas de la conquista de México* (Mexico City, 1950), pp.55-56.

own weapons. Although they were grinding down the Spaniards through attrition (plus the exhaustion of Spanish ammunition and food supplies), the Tlaxcaltecs recognised that instead of wiping out this threat, they could ally with the Spaniards and use them against their greater enemy, the Aztecs. The Spaniards had no hope of defeating the Aztecs themselves, but their weapons could penetrate the enemy's lines, and the vastly larger Tlaxcaltecs forces could then pour through these breaches, turn the Aztecs' flanks, and defeat them, which they had been unable to do on their own. The Tlaxcaltecs therefore stopped fighting the Spaniards and allied with them against the Aztecs. 42

It might appear that I have downplayed the role of Spanish cavalry, armour, and steel swords, but horses were so few that, despite Spanish claims of the effectiveness of their mounted lancers, they were most likely useful in scouting and communications. They did not speed the army, which was on foot, nor did the few horses carry supplies. And once the siege of Tenochtitlan began, their use on the causeways leading to the city was minimal as they were freely attacked from canoes on both flanks. Even after they entered the city, the Aztecs had strewn boulders in their plazas to prevent galloping, and attacked the horsemen with stones and projectiles from the adjacent house roofs.

Spanish steel swords were better than the Aztecs', in that they were more durable, but their edges were less keen than the macuahuitls' obsidian ones. They could, however, be used not only for slashing, like the Aztec broadswords, but also for thrusting, which the native swords could not. And although Spanish armour was iron or steel, it was hotter, heavier, and offered little more protection against native arms than the lighter, cooler native cotton armour which many Spaniards adopted. Although their solid plate could not be penetrated by arrows, their stone points shattered on them frequently throwing fragments into their wearer's faces. Those who wore mail discovered that while they could stop arrow points, their reed shafts could nevertheless continue their momentum, splinter, and send slivers on through the links. Moreover, the Spaniards found that the stones thrown by slings affected them the most, as rigid armour did not

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⁴² For a fuller discussion of this interpretation of the Conquest, see Ross Hassig, *Mexico* and the Spanish Conquest (Norman, OK, 2006).

⁴³ Sahagún, Historia general, 12:84, 86.

⁴⁴ Hernán Cortés, *Cartas y documentos*. (Mexico City, 1963), 177; Díaz del Castillo, *Historia verdadera*, vol. 2: pp.55-56; Sahagún, *Historia general*, 12:105, 107-108; Bernardino de Sahagún, *Conquest of New Spain: 1585 Revision*. (Salt Lake City, UT, 1989), pp.123-24.

absorb their impact as did cotton armour.⁴⁵ As for its disadvantage, during the attack along the causeways, the Aztecs quickly discovered that in simply grabbing a Spaniard and pulling him into the lake, the armour would assist in drowning them.⁴⁶

Whatever the pros and cons of the Spanish armour (and few of them had full body armour), it did not provide the apparent advantage. The Aztecs were already accustomed to fighting armoured opponents, albeit with a different type, and although a very few Spaniards may have worn greaves or other leg armour, the basic Aztec strategy of attacking the legs to bring down their opponents, rendered the vast number of Spaniards just as vulnerable as their indigenous allies. This was a type of warfare the Aztecs had long practiced and perfected in search of captives, as notably illustrated when 68 Spaniards were captured on 30 June 1521, a debacle from which Cortes himself was narrowly saved while being dragged off.⁴⁷

The question, however, is whether capturing the Spaniards was the goal or merely a tactic, given the difficulty of killing them in their armour. It might be speculated that had the Aztecs abandoned capture in favour of simply killing the enemy, the outcome of the Conquest may have been different. But the psychological impact of such captures would have been significant, as ten of the 68 captured Spaniards were decapitated immediately and their heads were thrown over the front lines into the Spaniards' lines. The remaining captives were taken to the Great Temple where their hearts were cut out. Thereafter, their faces and hands were skinned, tanned, and sent to wavering towns. Although killing Spaniards would have been a goal in the Conquest, so too was capturing them for the psychological benefits in the struggle for allies being waged by both sides.

⁴⁵ Díaz del Castillo, Historia Verdadera, 1:188.

⁴⁶ Cortés, Cartas, 155; Historia verdadera, 2:18; Sahagún, Conquest, p.110.

⁴⁷ Francisco de Aguilar, Relación breve de la conquista de la Nueva España, (Mexico City, 1977), p.96; Díaz del Castillo, Historia verdadera, vol. 2: p.33, 53; Durán, Historia, vol. 2: pp.565-66; Alva Ixtlilxóchitl, Obras Completas. Vol. 1: pp. 472-73; López de Gómara, Historia general, vol. 2: pp.262-63; Sahagún, Historia general, vol. 12: p.104; Sahagún, Conquest, p.121.

⁴⁸ Aguilar, Relación breve, p.96; Cortés, Cartas, pp.171-72; Díaz del Castillo, Historia verdadera, vol. 2: pp.33-36, 39-41, 53; Durán, Historia, vol. 2: pp.565-66; Alva lxtlilxóchitl, Obras Completas, vol. 1: pp.472-73; López de Gómara, Historia general, vol. 2: pp.262-63; Sahagún, Historia general, vol. 12: p.104.

Protected by Spanish armour, mail, and the adopted native cotton armour, the wounds noted by the conquistadors are most often to exposed areas and around the armour, by projectiles and blades going through the neck and arm openings. The Spaniards' bodies were generally poor targets, so the traditional strategy of attacking the legs, which on the Spaniards were largely unprotected, may have remained the most effective approach available to the Aztecs and the one with the greatest psychological effect. Had the Spaniards been the sole combatants arrayed against the Aztecs, the conflict would have ended quickly and decidedly in the Aztecs' favour. But while the Spaniards were indispensable for the unstoppable projectile file they provided, the vast bulk of hand-to-hand combat was carried out by their local allies who were accustomed to warfare as fought by the Aztecs.

The war ended in August 1521 with the Aztec defeat, which Cortés claimed occurred on 13 August 1521 with king Cuauhtemoc's surrender. But the fighting actually continued for four days longer, strongly suggesting that his assertion of Cuauhtemoc's surrender was propaganda to bolster his own claims for rewards from the Crown, while the actual conquest was carried out and completed by the Tlaxcaltecs and other allies.49

The popular presentation of Aztec wars as colourful and heavily ritualised, reflects either a misunderstanding of the complexity and purpose of their warfare or a theoretical bent that disregards what may actually be gleaned about warfare from the extant historical accounts. Aztec warfare was, in fact, a complex undertaking, made more so by the technological constraints of New World civilisations. Yet overcoming these is among the many factors that make the study of Aztec warfare fascinating. Beneath the generalisations about their warfare, and at the individual level rather than the movements of entire armies, combat takes on a purpose and immediacy that has been virtually ignored.

State goals may have dictated the wars that the Aztecs fought, but individual combatants had their own as well. Many soldiers sought to fight in ways that benefitted themselves, not by killing their opponents but by capturing them in a manner that still enabled them

⁴⁹ For a fuller discussion of surrender in Aztec warfare, and its implications for the conquest of Tenochtitlan, see Ross Hassig, 'How Fighting Ended in the Aztec Empire and its Surrender to the Europeans,' Holger Afflerback and Hew Strachan, (eds.), How Fighting Ends: A History of Surrender, (Oxford, 2012), pp.13-23. 24

to make the trek back to Tenochtitlan. Their combat tactics may have furthered state goals but were aimed primarily at advancing their own. Nevertheless, and paradoxically, this style of combat made the Aztecs more effective against the Spaniards than they would otherwise have been, by preparing them to avoid the steel armour that should have made these invaders less vulnerable in battle.