

Rivers of Blood: An Analysis of One Aspect of the Crusader Conquest of Jerusalem in 1099

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Resumen

Muchos cronistas medievales describieron la conquista cristiana de Jerusalén durante la Primera Cruzada en 1099 y sus palabras han sido repetidas desde entonces sin mayor cuestionamiento. Tan horrible como pudo haber sido la masacre en la mezquita y en el resto de la ciudad, nunca pudo haber sido tan grande como para fundamentar los reportes de calles ensangrentadas que con tanta frecuencia se indican hoy en día. Estas eran descripciones fantásticas, claramente imposibles. Las descripciones modernas de los cruzados moviéndose por calles de sangre han convertido una masacre histórica en algo ridículo. La sangre que se derramó en la masacre de Jerusalén fue real, pero no así los ríos sangrientos que han llegado a las páginas de los periódicos modernos y a los libros populares.

Palabras claves

Primera Cruzada - Templo de Salomón - Mezquita de Al-Aqsa - Niveles de sangre

Abstract

Many medieval chroniclers described the Christian conquest of Jerusalem during the First Crusade in 1099 and their words have been repeated ever since without much scrutiny. As horrible as the carnage was in the mosque and in the rest of the city, it could never be enough to sustain the reports of streets of blood that are heard so often today. These are fantastical descriptions, clearly impossible. Modern descriptions of crusaders wading through streets of blood turn a historical massacre into little more than a cartoon. The blood that was spilled in the massacre of Jerusalem was real; the rivers of it that course down the pages of modern newspapers and popular books are not.

Keywords

First Crusade - Temple of Salomon - Al-Aqsa Mosque - Blood Levels

On November 10, 2001 -a month after the terrorist attacks of 9/11 in the United States-, Former President Bill Clinton gave a speech to the students of Georgetown University. In that speech he attempted to contextualize the recent shocking events within a larger framework of history and modern foreign affairs. Surprisingly, the crusades were part of that effort. He said:

Those of us who come from various European lineages are not blameless. Indeed, in the first Crusade, when the Christian soldiers took Jerusalem, they first burned a synagogue with 300 Jews in it, and proceeded to kill every woman and child who was Muslim on the Temple Mount. The contemporaneous descriptions of the event describe soldiers walking on the Temple Mount, a holy place to Christians, with blood running up to their knees. I can tell you that that story is still being told today in the Middle East and we are still paying for it¹.

This disturbing image of blood running up to the knees of the crusaders -or to other levels- after the conquest of Jerusalem in 1099 has become one of the most recognizable episodes in medieval history.

It is not surprising that the image of Jerusalem's streets coursing with blood is foremost in the minds of most people when they envision the crusades. It is a regular feature in popular books and the media. For example, in her bestselling book, *Jerusalem: One City, Three Faiths*, Karen Armstrong reports that in the sack of 1099 'The streets literally ran with blood'². In a 2000 *Washington Post* review of my book, *A Concise History of the Crusades*, journalist and bestselling author James Reston Jr. described the streets of Jerusalem running ankle deep in blood. The following week a reader wrote in to the newspaper: 'that strikes me as a physical impossibility -even considering the narrow streets of the city- and was probably impossible even with a massive use of anticoagulants'³. That lone dissent was not enough to keep *The Times of London* from publishing an editorial one year later that claimed:

Few would dispute that the Crusades involved war crimes on a massive scale, a whipping-up of religious hatred for the purposes of pillage and political consolidation in fractured Europe, a largely unprovoked war waged against a deeply cultured people. In 1099 the Crusaders desecrated the Dome of the Rock and murdered Jews and Muslims in such numbers that the streets of Jerusalem ran ankle-deep with blood⁴.

¹ "A Struggle for the Soul of the 21st Century", *Salon*, November 10 (2001).

² K. Armstrong, *Jerusalem: One City, Three Faiths* (New York, 1997), 274.

³ *Washington Post*, July 9, 2000.

⁴ *The Times of London*, October 27, 2001.

And some authors were willing to bring the blood levels higher still. In 2002, Arthur Goldschmidt reported in his *A Concise History of the Middle East* that ‘Human blood flowed knee-deep in the streets of Jerusalem’ in 1099⁵.

During the next several years, the knee level of blood in the streets of Jerusalem became somewhat of a standard. In an editorial on the Ridley Scott movie, *Kingdom of Heaven*, for example, *The Guardian* reported in 2005 that, ‘as they [the crusaders] stormed through its streets they murdered every Muslim and Jewish man, woman, and child, wading, it was recorded, knee-deep in blood’⁶. The same year Stephen Tomkins explained in his book *A Short History of Christianity* that ‘in an orgy of sacrificial butchery, they [the crusaders] waded through narrow streets ankle deep, in places knee deep, in blood’⁷. And Tomkins’ book had strong supporters. Terry Jones of *Monty Python* fame, who hosted his own documentary on the crusades, referred to Tomkins’ book as ‘the sort of book I wish I’d read fifty years ago... His book explains a lot’⁸.

There are so many examples of these streets coursing with blood in modern media outlets and history books that to list more may seem to belabor the point. We will content ourselves, then, with just two more recent examples. In her popular 2008 book, *What Every American Should Know about the Middle East*, journalist Melissa Rossi writes:

On July 15, 1099, when this motley crew of wealthy princes and tattered peasant warriors traveling on foot breached the wall of their main destination, Jerusalem, the violence was even worse; the Crusaders slaughtered almost every resident of the town; so much blood filled the streets that the mild accounts have it flowing above their ankles⁹.

Similarly, Moshe Amirav, reports in *Jerusalem Syndrome: The Palestinian-Israeli Battle for the Holy City*, published in 2009, that ‘writings of the period describe rivers of Muslim blood flowing through the streets of Jerusalem, and the horses of the Christian knights wading up to their knees in the blood of the Muslim dead’¹⁰.

Just as the *Washington Post* reader in 2000, most modern crusade historians

⁵ A. Goldschmidt, *A Concise History of the Middle East* (Boulder, 2007), 93.

⁶ *The Guardian*, May 10, 2005.

⁷ S. Tomkins, *A Short History of Christianity* (Oxford, 2005), 108.

⁸ Tomkins, *A Short History*, front cover.

⁹ M. Rossi, *What Every American Should Know about the Middle East* (New York, 2008), 55.

¹⁰ M. Amirav, *Jerusalem Syndrome: The Palestinian-Israeli Battle for the Holy City* (Portland, 2009), 196.

have tended to approach the medieval reports of running blood during the sack of 1099 with some skepticism. To use myself as an example, in *The New Concise History of the Crusades*, published in 2005, I wrote: ‘Later stories of the streets of Jerusalem coursing with knee-high rivers of blood were never meant to be taken seriously. Medieval people knew such a thing to be an impossibility. Modern people, unfortunately, often do not’¹¹.

In November 2008, Jay Rubenstein of the University of Tennessee gave a lecture for the Crusades Studies Forum at Saint Louis University. The title of the lecture was “The First Crusade and the End of the World”. In the questions that followed Rubenstein spoke of the crusaders in 1099 wading through the blood of their victims. I quickly pointed out that those reports were, of course, not meant to be taken literally. To my surprise, Rubenstein responded that he believed that they should be. He related his own experience witnessing a murder victim on a street in New York City and expressed his astonishment at the amount of blood that just one human body really contains. Since I have not witnessed a murder victim, I yielded the point. But the exchange has led me to take up the question of the massacre of 1099 and look more closely at common assumptions both in the general public and among crusade specialists.

On July 15, 1099, after a hot, difficult and deadly siege that lasted more than a month, the First Crusade breached the walls of Jerusalem and captured the city. According to the custom of war, adhered to by Muslims and Christians alike, the city and all of its inhabitants were at the mercy of the conquerors. Since all of the Muslim commanders and expelled all of the Christian inhabitants of Jerusalem several months earlier, there was no reason beyond human compassion to spare the defenders of the city. The latter no doubt made it abundantly clear that they would have no mercy for the Christians when the long-expected relief force arrived from Egypt. Nevertheless, the crusade leaders issued orders to neutralize opposition, but to spare those who surrendered. In the chaos that followed, those orders were often ignored.

The anonymous author of the *Gesta Francorum*, who was an eyewitness to the events, paints a vivid picture of the slaughter that followed the conquest of Jerusalem. Having broken through the city’s walls, the crusaders chased the defenders, who fled to the high ground of Temple mount, killing many along the way. At last, the *Gesta* records, the Muslim soldiers fled to ‘Solomon’s Temple’. ‘And at that place there was such a slaughter that our men were wading up to their ankles (*ad cavillas*) in blood’. The author also relates the

¹¹ T. F. Madden, *The New Concise History of the Crusades* (Lanham, 2005), 34.

experience of the crusade leader Raymond of Saint Gilles. First, he negotiated the peaceful surrender of David's Tower, allowing the Muslim garrison inside to depart freely. Then, he chased and killed other Muslim defenders up to the Temple. There the Muslims fought all day 'so that their blood was flowing throughout the Temple'¹². Christian writers at this time referred to the entire modern al-Haram al-Sharif as 'the Temple'. The Temple of Solomon was their name for the Al-Aqsa Mosque while the Temple of the Lord was the Dome of the Rock.

According to the *Gesta Francorum*, many were killed, but many others were spared. Aside from those in the tower, many other defenders climbed onto the roof of the "Temple". Two of the crusade leaders, Tancred and Gaston of Béarn, gave them their banners as a sign of their protection. But the next day a body of crusaders went to the mosque and began killing those perched on its roof. Tancred, the *Gesta* author reports, was embarrassed by the incident. When the sack was over the city was "almost" filled with corpses. Muslim survivors were ordered to remove the dead, bringing them outside the walls where they were piled in heaps as high as houses for burning¹³.

Other eyewitness sources provide a few additional details. Peter Tudebode, a priest who was present during the sack but who drew liberally from the *Gesta* told much the same story, although with some differences. He made no mention of blood in the al-Aqsa Mosque on July 15, but instead reserved that description for the killings on July 16, when 'blood was flowing throughout the Temple'. According to Peter, it was Tancred himself who ordered the killings -something clearly contradicted by the *Gesta*. Tancred agreed that corpses filled the city and, like the *Gesta*, reported house-high mounds of them brought outside the walls for burning¹⁴.

Raymond of Aguilers, the chaplain to Count Raymond of Saint Gilles, was also present at the conquest. His account provides extensive details of the slaughter -so extensive and gruesome, in fact, that its veracity has sometimes been called into question. Specifically regarding the blood levels, Raymond reports that the killing of Muslims was so great that at 'Solomon's Temple and Portico' (i.e. the al-Aqsa mosque) crusaders rode in blood that was up to their knees (*ad genua*) and to the bridles of their horses (*usque ad frenos*

¹² *Gesta Francorum et aliorum Hierosolymitanorum*, ed. Rosalind T. Hill (Oxford, 1972), 91-92.

¹³ *Gesta Francorum*.

¹⁴ Petrus Tudebodus, *Historia de Hierosolymitano itinere*, eds. J.H. Hill and L.L. Hill (Paris, 1977), 140-42.

equorum). The churchman Raymond justifies the apocalyptic levels of slaughter as a purification of the Temple in the blood of those who had profaned it¹⁵.

Raymond of Aguilers' elevation of the blood levels on the Temple Mount was similarly followed in the letter of the crusade leaders that was sent to the pope in September 1099. Interestingly, though, the letter seems to mash together the two references from Raymond into one description. It reads: 'If you wish to know what was done unto the enemies found there, rest assured that in Solomon's portico and in his Temple our men rode in the Saracens' blood up to the knees of the horses' (*ad genua equorum*)¹⁶.

From these eyewitness accounts of the conquest of Jerusalem in 1099, we can make two clear observations. First, the blood levels were on the rise -from ankle, to knees, to the bridles of the horses. Second, it was not the streets of Jerusalem that were reported to be awash in blood, but at most the al-Haram and more likely simply the al-Aqsa Mosque.

Contemporary accounts by those who did not witness the conquest of Jerusalem provide additional details, but no agreement on the blood levels in the city. Fulcher of Chartres arrived in Jerusalem some five months after the sack. In his chronicle he repeats the story of the Muslim defenders fleeing to the high ground of the Temple and barricading themselves into the building there. When the crusaders finally forced their way in they beheaded ten thousand of the defenders, causing the blood in the Temple to reach the ankles (*ad bases*). No one, Fulcher contends, was left alive. Even months later the stench of the corpses was terrible¹⁷.

Albert of Aachen is among the most important contemporary chroniclers of the First Crusade who did not himself participate. Instead, Albert compiled the recollections of the men who followed Godfrey de Bouillon after their return to Europe. Albert tells a highly detailed and exceptionally bloody story of the conquest in 1099. Yet he does so not with approbation, but clear disapproval. He uses the gory excess of some crusaders to contrast with that of his hero, Godfrey, who prayed piously at the Holy Sepulcher. According to Albert the Muslim defenders fled to Solomon's palace, where they were cornered and massacred

¹⁵ *Le "Liber" de Raymond d'Aguilers*, eds. L.L. Hill and J.H. Hill (Paris, 1969), 150-51.

¹⁶ H. Hagenmeyer, *Epistulae et chartae ad historiam primi belli sacri spectantes. Die Kreuzzugsbriefe aus den Jahren 1088-1100* (Innsbruck, 1902), no. 18, 171; B.Z. Kedar, "The Jerusalem Massacre of July 1099 in the Western Historiography of the Crusades," *Crusades* 3 (2004): 15-75, here 18.

¹⁷ Fulcher of Chartres, *Historia Hierosolymitana*, ed. Heinrich Hagenmeyer (Heidelberg, 1913), 301-9.

by the crusaders. Blood flowed across the floors, reaching the ankles (*ad talos*) of the crusaders. Like Fulcher, Albert reports that ten thousand were killed that day on the Temple mount. Like the *Gesta*, Albert describes the bloodshed halting at the Temple on the first day with many Muslims taking refuge on the roof. Then, on the second day, against the wishes of Tancred, those Muslims were killed as well. Albert goes on to assert, however, that on the third day the crusaders killed everyone else, something contradicted by the *Gesta* and not reported by other eyewitness sources¹⁸.

Guibert of Nogent's chronicle, *Dei gesta per Francos*, was a reworking of the *Gesta Francorum* augmented by oral reports and other information that the author had collected. Guibert tells much the same story regarding the conquest of the city, describing the flight to Solomon's Temple and the crusaders' capture of the building and subsequent slaughter of those inside. Of course, Guibert does not omit what had become an obligatory description of the blood levels in the mosque. He reports that a wave of blood there almost reached the crusaders' ankles, although he later refers to it washing over the tops of their shoes¹⁹. Robert the Monk, likewise refers to the blood flowing in the Temple, although he imagines that the waves are so strong that the hacked and strewn body parts of the killed floated and rolled about the area in a haphazard fashion²⁰.

Although it was written nearly a century after the events, we must also consider the chronicle of William of Tyre. As a learned man, a high churchman, and a native of the Kingdom of Jerusalem, William was in a position to gather important information for his history of the crusader states. He was familiar with previous histories, particularly those by Albert of Aachen and Fulcher of Chartres, but he by no means always followed them. Unlike the earlier authors, William was very familiar with Jerusalem, having lived there much of his life. In his description of the massacres after the conquest on July 15, 1099, William is more topographically clear. While earlier authors use referred to the Temple mount massacre taking place in a variety of places with changing names, William places it only in the Temple of Solomon, or the al-Aqsa mosque. William extensively describes the carnage there, describing the dismembered limbs, hacked bodies, and blood everywhere. William accepts the, by then, conventional figure of ten thousand

¹⁸ Albert of Aachen, *Historia Ierosolimitana*, ed. Susan Edgington (Oxford, 2007), 420-42.

¹⁹ Guibert of Nogent, *Dei gesta per Francos*, ed. R.B.C. Huygens, *Corpus Christianorum, Continuatio Mediaevalis*, 127A (Turnhout, 1996), 279-81.

²⁰ Robert the Monk, *Historia Iberosolimitana*, in *Recueil des historiens des croisades: Historiens occidentaux* (Paris, 1844), 3, 866-69.

killed in the Temple of Solomon. But unlike authors in Europe, William does not report that the entire population was killed. Rather he maintains that an additional ten thousand were killed elsewhere in the city, all on the same day as the Temple massacre. As for the blood levels in the al-Aqsa mosque, William omits them entirely. Instead, he describes the crusaders as covered in blood from head to toe, but not wading in it to any depth²¹.

There can be no doubt that the conquest of Jerusalem in July 1099 was a bloody affair. The eyewitnesses as well as contemporary and near-contemporary writers made that abundantly clear. But at least in the first century after the events, no one suggested that the streets of Jerusalem ran with blood at any level whatsoever. The blood that was described as coursing through the Temple of Solomon did not make its way to the city streets until the thirteenth century. It is then that we have two chronicles which provide this description. The *Eracles* were an Old French adaptation of William of Tyre, written initially in the mid-thirteenth century by an unknown cleric. The narrative presented in this work is somewhat condensed and extended past 1184, when William of Tyre's history ends. The *Eracles* in its many forms was extraordinarily influential with dozens of manuscripts still surviving – far more than William, which is more widely used today. As an accurate account of events, the *Eracles* is clearly inferior to William. Regarding the conquest of Jerusalem, the *Eracles* omits any mention of the blood levels at the Temple, but does describe the streets of the city streaming with blood. Similarly, Matthew Paris's (d. 1259) *Historia Anglorum*, written at about the same time and perhaps making use of the *Eracles*, describes the crusaders wading through rivers of blood. Benjamin Kedar has demonstrated how the popularity of the *Eracles* reverberated through the histories of later authors, such as Subsequent translations or reworkings of the *Eracles*, such as the Castilian work known as *La gran conquista de Ultramar* or the Venetian *Secreta Fidelium Crucis* by Marino Sanudo Torsello. These works do not fail to mention the recently invented rivers of blood in Jerusalem's streets. And so, by the fourteenth century, the reports of blood flowing through one mosque had been generalized to include the entire city²².

Kedar's excellent study on the historiography of the massacre of 1099 makes clear that it not only remained bloody across the centuries, but indeed became bloodier still. Under the pens of Enlightenment writers like Voltaire, Edward Gibbon, or Charles Mills, it became a blood bath of the first order. In part this

²¹ William of Tyre, *Chronicon*, eds. R.B.C. Huygens, H.E. Mayer, and G. Rösch, *Corpus Christianorum, Continuatio Mediaevalis*, 63 (Turnhout, 1986), 411-12.

²² Kedar, *Jerusalem Massacre*, 33-34.

was a rejection of a war that seemed bizarre to Enlightenment sensibilities. In part, though, it was the discovery of eastern texts which greatly outstripped the contemporary Latin estimates. Abu'l-Fida, for example, claimed that 70,000 were killed in the massacre, while Ibn Taghribirdi put the total at 100,000²³.

By the mid-nineteenth century, historians relying on original sources had left behind the streets of blood, returning to the waves of blood at the Temple. Throughout the twentieth century scholars have selected whichever blood level that suits them, since a variety of sources exist to support each of them. However, the streets of blood were not abandoned outside of the circle of crusade specialists. In 1910, the *Encyclopedia Britannica* included a long account, which was later published as a separate book, by Ernest Barker. It stated that 'The slaughter was terrible, the blood of the conquered ran down the streets, until men splashed in blood as they rode'²⁴. Because of the way that the *Encyclopedia Britannica* was revised, this version lasted for decades²⁵. It may or may not have influenced Sir Steven Runciman while he was writing his masterpiece, *A History of the Crusades*, in 3 volumes in the 1950s. This work, which remains the best known work on the crusades today, single-handedly fashioned an image of the wars in the modern mind which resists all scholarly efforts to dispel. Runciman reported that aside from the garrison in the tower, no one escaped Jerusalem alive. He wrote: 'When Raymond of Aguilars later that morning went to visit the Temple area he had to pick his way through corpses and blood that reached up to his knees'²⁶. Raymond, of course, says nothing of the kind. But Runciman's prose does leave the impression that the streets were filled with blood and bodies. Later in his work Runciman underscored this point, saying 'When the carnage stopped, the streets were running with blood'²⁷. As Benjamin Z. Kedar has recently noted concerning this passage, 'evidently we are confronted with a master storyteller'²⁸.

Torrents of blood, be they in the Temple or in the streets, were dealt a blow -at least among crusade scholars- by John Hugh Hill and Laurita L. Hill in their edition of Raymond of Aguilars. They pointed out that Raymond's description of the blood up to the bridle of the horses, '*usque ad frenos equorum*' is

²³ Kedar, *Jerusalem Massacre*, 42-52.

²⁴ E. Barker, "Crusades," *Encyclopedia Britannica* (Cambridge, 1911).

²⁵ Indeed it was not completely rewritten until 2003. T.F. Madden, "Crusades," *Encyclopedia Britannica* (Chicago, 2003).

²⁶ S. Runciman, *A History of the Crusades* (Cambridge, 1951-54), 1, 286-87.

²⁷ Runciman, *A History*, 1: 337.

²⁸ Kedar, *Jerusalem Massacre*, 58.

actually drawn from Revelation 14:20: ‘and the wine press was trodden outside the city, and blood flowed from the wine press, as high as a horse’s bridle, for one thousand six hundred stadia.’ In the Vulgate, the words used are ‘*usque ad frenos equorum*’ -the same words used by Raymond²⁹. This discovery has led most crusade historians -including myself- to view the medieval depictions of blood in the al-Aqsa Mosque or anywhere else in Jerusalem to be understood symbolically as a righteous purification of the city. This is not to deny that the massacre in 1099 was not horrible or that there was not an abundance of blood. But it is to recognize that the clerical authors of these texts were approaching their subject from other perspectives than simply a stark reporting of facts.

However, more recently we can find the first questioning this reasoning. In Kedar’s important article he maintains that scholars are not justified in rejecting all eyewitness reports of blood at various levels in the Temple of Solomon simply because Raymond of Aguilars took his description from the Bible. The others, after all, did not. He therefore suggests that ‘blood puddles in Mosque al-Aqsa were indeed ankle-high at some points and the ecstatic Raymond -and only he- chose to lend grandeur to the scene by using the words of the Apocalypse’³⁰. In other words, Kedar adopts the least bloody depictions, rejecting the others because of their association with Revelation or simply because they strain credulity. Kedar also brought to the question a new source, Ibn al-Arabi, a Spanish Muslim who was in Jerusalem before the massacre, went to Egypt, and may have visited it afterward. Al-Arabi heard reports of the conquest and so his information is at least contemporaneous. He reports that three thousand men and women ‘including God-fearing and learned worshippers’ were killed in the al-Aqsa Mosque in 1099. He also mentions a learned woman and a few other women who were killed near the Dome of the Rock. Kedar concludes that this source, which was well-informed and had no reason to minimize the death toll, gives us a figure -three thousand- which would be sufficient to fill the mosque to ankle depth blood³¹. In short, Kedar agrees with Jay Rubenstein that we should take our sources seriously.

Surprisingly, with all of this discussion of rivers, streams, or pools of blood, no one has ever attempted to discern whether such things are within the realm of physical possibility. Although we are dealing with an episode of bloody horror, we are also dealing with basic measurements that can be evaluated.

²⁹ *Le “Liber” de Raymond d’Aguilers*, 150, n. 2.

³⁰ Kedar, *Jerusalem Massacre*, 65.

³¹ Kedar, *Jerusalem Massacre*, 73-75.

In order to evaluate the logistical requirements for a literal blood bath, we should begin with the most conservative descriptions of the slaughter in July 1099. These describe a killing in the al-Aqsa mosque great enough to cover the floor ankle-deep in blood. The al-Aqsa mosque was still relatively new in 1099. The earlier structure was mostly destroyed in an earthquake in 1033. Because the mosque is built on Herodian fill it is particularly susceptible to earthquake damage. A major reconstruction of the mosque was begun immediately and completed in 1065, 34 years before the crusaders arrived³². During the period of the Latin Kingdom, the mosque served as the headquarters for the Knights Templar, who expanded it. However, the central portion of the present al-Aqsa mosque corresponds to the structure in 1099, with seven aisles and probably no side doors. This portion is 83 m. by 56 m., and thus 4648 sq. m. In order to fill this space to a consistent level of 10 cm. (4 inches or 1 m) would require 464.8 cubic meters of liquid (in this case, blood), which corresponds to 464,800 liters. Although the sight of blood can be traumatic, it remains that the average adult has 5 liters of blood in his or her body. Therefore, in order to fill al-Aqsa Mosque's square meters to ankle level would require the blood of 92,960 people. Since the population of Jerusalem in 1099 was less than half of that figure, it does not seem reasonable.

Or at least that is what I thought my conclusion would be. Upon a closer inspection of the eyewitness accounts, however, I realized that I had left an important component out of these calculations: bodies. It is clear from all descriptions that the slaughter in al-Aqsa was messy and that bodies were strewn everywhere. We are told that they had to be removed by Muslims or even poor Christians who did the dirty job for wages. The calculations above work only if we assume that each person was killed, drained of his or her blood, and then removed from the building. If, instead, we assume that the bodies remained where they fell they would naturally displace blood, thus increasing its overall level. The previous calculations also failed to take into account the pedestals and columns in the mosque, which would further reduce the square meters of the fill.

With these factors in mind, we can test al-Arabi's report of 3,000 killed against the *Gesta*'s and others' testimony of ankle-deep blood in the Temple. Do they, as Kedar seems to suggest, go together? An average adult human body at this time would likely be in the range of 5.5 feet tall (1.67 m.) and 1.3 feet wide

³² R.W. Hamilton, *The Structural History of the Aqsa Mosque* (Oxford, 1949), 73-74; E. Amikam, *Medieval Jerusalem and Islamic Worship: Holy Places, Ceremonies, Pilgrimage* (Leiden, 1995), 42-44.

(0.4 meters). If we assume that most of the dead fell separately and were not stacked one upon the other, then the average fallen body would take up 668 square meters of the al-Aqsa Mosque's floor space. Three thousand bodies would therefore fill up roughly 2004 square meters. In addition, the columns and other structures in the mosque filled approximately another 900 square meters. This would reduce the total open floor space in the building to 1744 square meters. To fill this space to 10 centimeters would require 174,400 liters of blood, which would correspond to 34,880 people. Again, this does not add up. Three thousand dead are simply not enough to bring the blood levels to the reported height. Instead, three thousand people would produce 15,000 liters, which would amount to less than 1 cm of standing blood -or about one quarter of an inch. And even that would quickly run out of the building or dry up.

The next question to consider is the possibility that the true number of dead was somewhere between al-Arabi's 3,000 and the Latin chroniclers' 10,000. Today the al-Aqsa mosque has a capacity of five thousand worshippers. This suggests that in times of distress, as this clearly was, that at least that many would have pushed their way into it. If five thousand people were trapped and killed in the mosque in 1099 and if all of the bodies lay prone on the floor, then only 408 square meters of area would be open. And the blood of the 5,000 would rise to a level of 6 centimeters or 2.25 inches. This is still below ankle depth, but it is certainly coming close to it.

What conclusions can be drawn from these gruesome calculations? First, we should bear in mind that there are assumptions and estimations in these figures that may not be warranted. That said, even these rough figures can give us further insight into the horror of a scene that even the killers approached with revulsion. For centuries accounts of the massacre have dwelt on the flowing blood rather than the mass of dead bodies -which are also well attested in the contemporary sources. The killing of three thousand people in the al-Aqsa mosque would probably result in half or more of the open floor space in the building having been covered by bodies. If five thousand people were killed, then a good three-quarters or more of the area would have been littered with the bodies. In either case, the splashing blood as one walked across the horrific landscape would be highly noticeable, and the grotesque and mutilated bodies would be an image that one would not forget. Even a hardened soldier did not see that sort of slaughter often, if ever.

Given the testimony of al-Arabi and the physical constraints of the building, the massacre in the Temple of Solomon must have claimed the lives of some 3,000 to 5,000 Muslims. Although the blood did not run to ankle height -let

alone calf, knee, or horse reins height- it was enough to cover the floor and splash noisily when stepped in. In the trauma of the event, with its mayhem and mass killing, it is no wonder that a few centimeters or even a few hundred centimeters were added to the level of blood that flowed through the mosque al-Aqsa on that horrible day in July 1099.

And yet, as horrible as the carnage was in the mosque and in the rest of the city, it could never be enough to sustain the reports of streets of blood that are heard so often today. Temple Mount is a largely open area measuring 144,000 square meters. It would require the blood of almost three million people to fill it to ankle-depth. And, although Jerusalem's streets are narrow, it would still likely require at least an additional one million to fill those. These are fantastical numbers, clearly impossible. Modern descriptions of crusaders wading through streets of blood turn a historical massacre into little more than a cartoon. The blood that was spilled in the massacre of Jerusalem was real; the rivers of it that course down the pages of modern newspapers and popular books are not.